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ABSTRACT

This book, one of a series that uses Geographic Information Systems (GIS) to outline the need for and provision of services (education, health, housing, electricity, roads, telecommunications, postal services, and police services) in each of the nine South African provinces, presents a global view or indicator of the simultaneous influence of the socio-economic status of people and the level of provision of domestic services and public facilities in one province Free State. The view in this book encapsulates its social and service profile, obtained, first, by developing indices for the social and service variables for the district. The book uses a single index, or benchmark, of levels of socio-economic status, household services, and public facilities in each magisterial district, created by combining these indices. According to the book, to provide information about local levels of development knowledgeable persons involved in service delivery in each province were contacted for their comments. The books in the series contain maps, tables, a bibliography, and contributions from spokespersons in non-governmental organizations, universities, government departments, service providers, parastatals, and research organizations. Demographic information used in the book is based on the 1991 census data. (Contains 29 references.) (BT)

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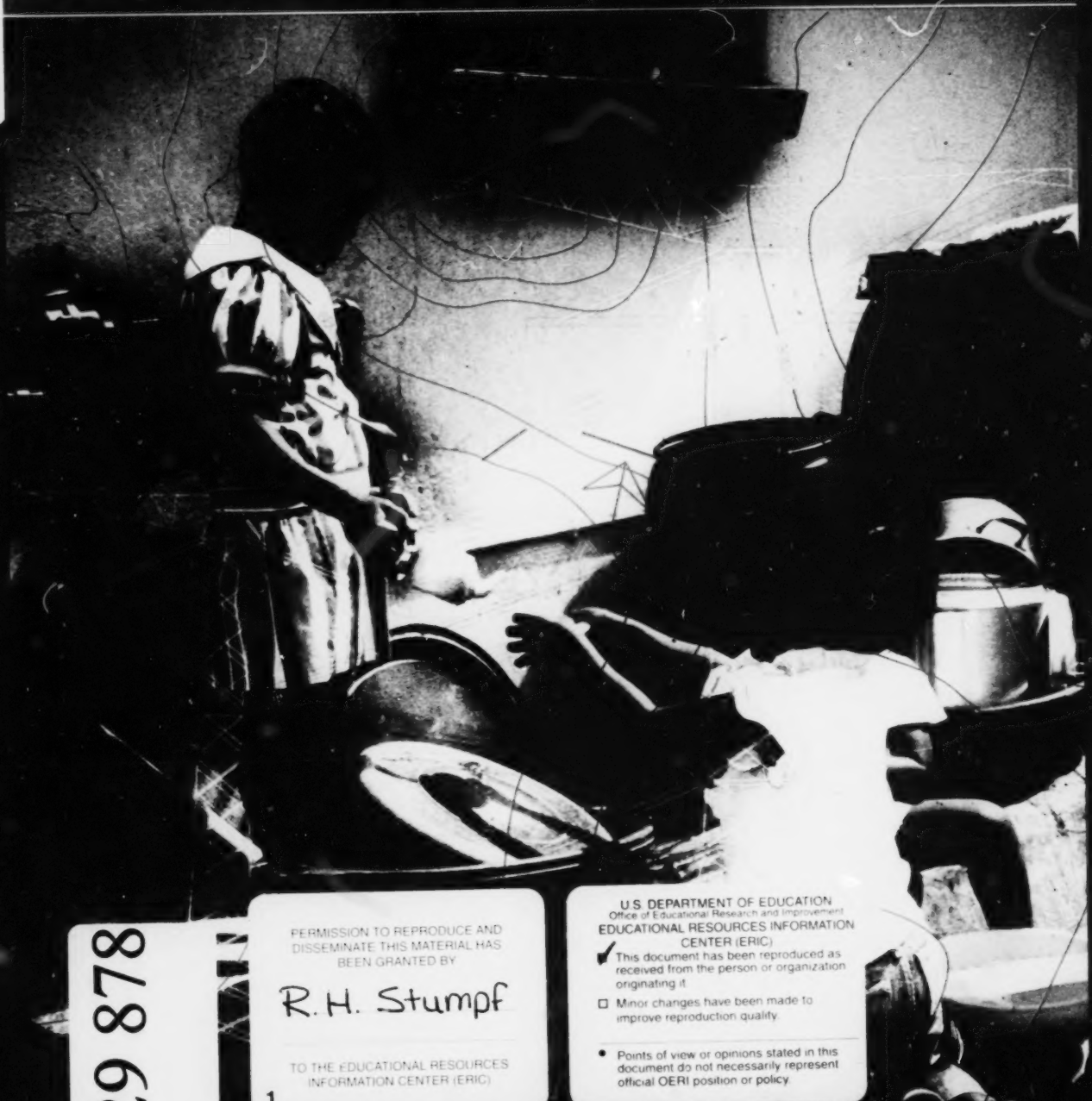
# SERVICE NEEDS + PROVISION



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# FREE STATE

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# SERVICE NEEDS AND PROVISION IN THE FREE STATE

# SERVICE NEEDS AND PROVISION IN THE FREE STATE

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# PREFACE

Little is known about the overall availability of services within the new provinces of South Africa in relation to fine-grained demographic distributions that are now becoming available through Geographic Information Systems (GIS) technology. Research that has been done on particular services such as water, sanitation and electricity has largely been undertaken in isolation by parastatal and government service providers and has not contributed to a holistic picture of the availability of basic services. In addition, this information has largely been collected in report and tabular format without any spatial representation of service provision relative to demographic distribution.

In this publication an attempt is made to provide, for the first time, a more complete spatial analysis of socio-economic, demographic and service variables for the Free State at magisterial district level. Similar publications have been produced for each of the new South African provinces. Not only will the location of needy communities be identified within the province, but the distribution of services such as water, sanitation, electricity, housing, education, health, roads, telecommunications, postal services, police services and even retirement facilities in relation to the demographic patterns of the province will also be established.

The demographic information is based on the 1991 Census data and the provision of services is based on information provided by organisations acknowledged in Chapter 5. When the 1996 Census data become available at enumerator area or magisterial district level, a temporal extension and trend analysis of this database could be undertaken if funding is available.

It is hoped that this publication will supply developers and planners with relevant information to assist in delivering and maintaining basic services. Development role-players at all levels should see the value of developing and maintaining spatially referenced databases that keep up to date with changing demographic and service patterns. The GIS Unit is currently compiling a database of the geographic location of development projects which will provide another important layer of information for decision makers.

J. Taylor
Regional Director
HSRC: KwaZulu-Natal Office

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# 1

# INTRODUCTION

The Human Sciences Research Council (HSRC) has identified the need for socio-economic information on the distribution of resources for infrastructure, services and facilities within South Africa as an important priority. This information will undoubtedly be required for the effective implementation of the Reconstruction and Development Programme (RDP) in the nine provinces.

Consequently the Geographic Information Systems (GIS) Unit of the HSRC undertook a project aimed at showing the patterns of service delivery in the Free State at a magisterial district level and relating this to the socio-economic needs of communities within the province. Infrastructure and service facilities identified for incorporation into the project were education, health, water, sanitation, housing, electrification, roads, telecommunications, postal services, police services and retirement facilities.

In order to focus on districts with relatively poor socio-economic profiles and those which require assistance to improve their basic quality of life, the following variables were mapped: population density, pupil:teacher ratio, poverty, number of households and dependency. The information was combined into an equally weighted Combined Social Needs and Service Provision Index which identifies a range of districts in the Free State as priority areas requiring the attention of provincial authorities.

Although some organisations have done a great deal of research on the availability of services in the province, none has provided the information in an integrated format which allows the distribution of these services and facilities in the province to be visualised. In addition, little work has been done to relate the provision of services to the needs of communities in the region. Consequently the GIS Unit of the HSRC undertook the project with the intention of entering the information into their GIS system and conducting analyses of the data sets. Maps reflecting the distribution patterns of services and underdeveloped communities in the Free State could then be produced.

The production of the document required collaboration with many organisations to obtain information on service provision and provide perspectives as to why specific distribution patterns exist, as well as to outline future trends in meeting the basic service needs of the province. The document has been written to provide a source of information to national and provincial decision makers. In addition, it will be available to development funding agents and planners who provide much-needed service infrastructure to needy communities in the Free State.

# 2

# THE CONCEPT OF GEOGRAPHIC INFORMATION SYSTEMS (GIS)

To many people the term Geographic Information Systems (GIS) is foreign and confusing. In essence, a GIS is a "system of computer hardware, software and procedures designed to support the capture, management, manipulation, analysis, modelling and display of spatially referenced data for solving complex planning and management problems" (Montgomery & Schuch, 1993). A GIS enables the transfer of spatial information from sources such as satellite images, aerial photographs, topocadastral maps and plans into a computer where the information is stored and analysed before being printed out as maps.

Geographic Information Systems (GIS) made their appearance in the late 1960s and 1970s. Some of the pioneering systems developed included those within the Harvard computer graphics laboratory and the Canada GIS (CGIS). The driving force behind the development of GIS stemmed from the need for organisations to solve particular spatial problems whether they occurred in a business, academic, resource management, social or engineering environment. Specifically GIS was born to meet the ever-increasing need to use and manage large spatially referenced data sets (Montgomery & Schuch, 1993).

GIS was introduced in South Africa in the early 1980s. Progress in its use was slow and South Africa lagged behind the rest of the world until fairly recently. The reason for this stems largely from sanctions that restricted exchange in GIS use, software, education and training. However, by the late 1980s and early 1990s GIS had progressed significantly within South Africa to become an important tool in providing information needed by decision makers and planners in implementing programmes such as the Reconstruction and Development Programme (RDP).

The advantages of GIS are numerous. Factors that make it indispensable as a decision-support tool include the ability to overlay and relate several layers of information, to conduct mathematical modelling of data sets, to develop spatial scenarios, to visualise development situations, and to construct spatial decision-support systems. One of its major benefits is that it provides a quick and integrated way of viewing information. In addition, with advances in computer technology and software, it allows for the storage, management, manipulation, analysis and output of large data sets.

For these reasons the HSRC decided to use the GIS as a tool in achieving its goals, particularly for projects such as the Service Needs and Provision project in the Free State. The GIS has enabled researchers in the GIS Unit not only to integrate data from a wide variety of sources but, in combining this data, to create new layers of information. Without the GIS it would have been impossible to analyse and spatially represent service provision in relation to population in the province.

# 3

# SUMMARY SOCIO-ECONOMIC PROFILE OF THE FREE STATE

Prior to the advent of democracy in South Africa the Free State was governed by three administrations: the Orange Free State, QwaQwa and Bophuthatswana. Of the 52 magisterial districts now forming the Free State, 50 were formerly governed by the white Orange Free State. Thaba 'Nchu and Witsieshoek were formerly administered by Bophuthatswana and QwaQwa, respectively.

The Gini coefficient of income inequality for the Free State is 0,67. This is above the South African average of 0,65. According to the Smith (1987) 71,9% of the total South African population were blacks but only 25,5% of the total national income accrued to them. The whites earned 64% of income, but comprised only 16,2% of the population. The Asians earned 3,2% of total income and made up 2,8% of the population. The coloureds were 9,1% of the population and earned 7,3% of total income.

The coefficient of advantage divides a group's income percentage by its population percentage. Scores above one indicate that a group's percentage earnings exceeds its percentage population. Conversely, scores below one indicate lower percentage earnings than population percentage. The whites percentage earnings were 3,95 times their percentage population. The Asians were the only other group with a coefficient of advantage above one, 1,14. The coloureds and blacks both had coefficients of advantage of less than one, 0,8 and 0,35, respectively.

According to Whiteford *et al.* (1995), the former Orange Free State (OFS) districts had an average poverty gap of R19 321 and an average poverty gap per capita of R554. As 80% of the population in the former OFS were blacks, the bulk of the burden of poverty certainly fell on black shoulders. Thaba 'Nchu and QwaQwa had lower poverty gap per capita values on average than the rest of the former OFS districts. This suggests that the blacks living in the former OFS districts were worse off than those living in the former black administered regions.

Average dependency ratios in the former OFS were 1,81. In the former black areas the dependency ratio was 3,25. Therefore a greater percentage of blacks in the former OFS were employed than in Thaba 'Nchu and QwaQwa. The blacks working in the former OFS must have been paid substantially less than those working in Thaba 'Nchu and QwaQwa, however, as this would explain why the average poverty gap per capita was greater in the former OFS districts.

The average pupil:teacher ratios for the entire population in the former OFS and the two black districts were 33:1 and 32:1, respectively. In the OFS the pupil:teacher ratio for blacks and whites was 39:1 and 19:1, respectively.

This brief overview of socio-economic conditions in the Free State shows that while dependency ratios were lower in the former OFS, the blacks received very low wages and had limited resources for schooling. This does not allow for an in-depth socio-economic analysis of the entire province, but the use of socio-economic and service data provide a more complete picture of conditions throughout the province. The use

of social and service indices, described in the next chapter, facilitates the use of a single index that summarises the effect of 5 social and 10 service variables.

# 4

# APPROACH TO THE STUDY

## 4.1 Methodology

The aim of the project was to detail the access of the population to services in each magisterial district of the Free State. This was not an exercise in mapping the exact location of pipelines supplying water to urban areas for example, but rather in mapping the percentage of households that have access to water supply. Thus the study has two main aspects: the socio-economic profile of the population in each magisterial district, and secondly, the relative access to these services between districts.

The socio-economic variables considered were

- population density
- total population
- employment
- dependency
- poverty
- functional literacy
- pupil:teacher ratios

The standard of living of the population in a magisterial district will often be an indicator of the access to services. Data relating to the socio-economic variables were obtained from the 1991 Census.

The services considered were

- education
- electricity
- housing
- roads
- water and sanitation
- post offices
- retirement dwellings
- health facilities
- police services
- telephones

Data on these services had to be obtained from the service providers before being georeferenced and entered into a GIS database format. Once the accessibility of services to the population had been mapped, maps and tables were distributed to experts in each service field for their comment.

## 4.2 Social and service indicators

A global view or indicator of the simultaneous influence of all the social and service indicators is necessary to encapsulate the social and service profile of each district. This will clearly arrange all districts along a social and service gradient, thereby facilitating prioritisation of districts for development interventions. This can be done

firstly by developing indices for the social and service variables that represent the social and service profiles of each district. Thereafter these indices can be combined to give a single index of the level of development of a district. These indices were developed for districts at both the national and provincial levels. This allows comparisons to be drawn between national and provincial priorities which differ due to varying provincial and national minimum and maximum values per variable. The variables selected therefore needed to have complete data coverage at both national and provincial levels.

The selected social variables were the poverty gap, pupil:teacher ratio, dependency ratio, total households, and population density. The service variables were the ratios of population to police stations, post offices and hospital beds; the ratio of road length to district area; the ratio of 6 to 17 year olds to schools; the percentages of fully serviced houses, informal houses, formal houses electrified and informal houses electrified and telephone shares. The social index had five variables each with twenty ranges giving a total number of 100 ranges. Additional columns were created to assign the rank of the variable per column. The theoretical minimum and maximum social index value would then be 5 and 100 respectively. The values for each variable could not be ranked in ascending order in all cases. High values in poverty, pupil:teacher ratios, dependency and population densities suggest underdevelopment, but a high value for total households would not. High index scores indicate underdeveloped districts needing development interventions. The corollary to this is that a district not requiring development intervention based on a social index would have a low index score and the following social profile: a low poverty gap, low pupil:teacher ratio, low dependency ratio, low population densities and a high number of households.

The service index had ten variables each having ten ranges. Here the theoretical minimum and maximum values are 10 and 100, respectively. Each service variable had to be ordered according to whether high scores were beneficial to a district or not. A district with a low service index score and not requiring development intervention would have the following service profile: low ratios of population to police stations, post offices and hospital beds; a high ratio of road length to district area; a low ratio of 6 to 17 year olds to schools; high percentages of fully serviced houses, formal houses electrified and informal houses electrified; high telephone shares, and a low percentage of informal houses.A district with a high index score requires development intervention and would have the following service profile: high ratios of population to police stations, post offices and hospital beds; a low ratio of road length to district area; a high ratio of 6 to 17 year olds to schools; low percentages of fully serviced houses, formal houses electrified and informal houses electrified; low telephone shares, and a high percentage of informal houses.

A combined index would add the service and social indices, both having a maximum of 100, and divide the sum by 2, giving a maximum to the combined index of 100. As in the social and service indices, the higher the combined index score the greater the degree of underdevelopment.

## 4.3 Spatial scales

Originally, the spatial analysis of service provision was to be based on the enumerator areas (EAs) from the 1991 Population Census, but for logistical reasons, outlined below, it was decided to confine the analysis to census districts. An EA is the smallest building block of the census and has been defined by the Central Statistical Service as "consisting of a number of visiting points ... a visiting point is any occupied unit, e.g. a house, flat, caravan, hotel etc." As one would expect, EAs are denser in urban areas than in rural areas. Census districts are groupings of EAs and, in most instances, follow boundaries similar to magisterial district boundaries.

The reason for the shift in focus from EAs to census districts is that most of the information on services and service providers is not readily available at EA boundary level but has been collected and is available at census district level. In addition, information at this level will provide decision makers and planners at a national and provincial level with appropriate information. Once it has been verified that an area is in need of services, more detailed information, which is not presently available at a detailed level such as EAs, can be collected.

Having said this, there are obvious problems in the analysis of service provision on a census district scale. The major problem is that there is a tremendous variation (demographic as well as in service provision) within districts. In a single district there may be well-provided formal towns, while the sparsely populated rural areas may have high poverty levels and the worst rates of basic service provision. When one analyses services at a census district level, these variations could be lost in averaging and aggregation.

## 4.4 Data problems associated with choice of spatial scale

Much of the service supply data which was acquired from the service providers was at a town level. So, for example, information was obtained for towns that have post offices, a number of pre-school facilities, etc. Each of the towns was then identified and placed in the correct census district. Often towns were not in the census database or on maps or atlases and thus personal knowledge and experiences had to be relied upon.

The problems that have been highlighted above, stress the need for better data collection, as well as the need to set standards on the spatial scales at which data is collected. This would greatly improve analyses in this field and would be an indispensable source of information to planners and service providers. The use of a GIS will facilitate this process since spatial units already exist at different scales from which data can be aggregated. Not only will this result in the standardising of databases, but it will also assist in the provision of information over several years and enable trend analyses to be done.

## 4.5 Problems associated with obtaining data from service providers

One of the main problems encountered in this project was the lack of clear definitions of services. This resulted in information being entered into the GIS and maps being produced for comments by the service providers, only to discover that not all, or conversely too many, facilities had been included in the definition of that service. It was thus important to establish a clear understanding of what is meant by a service and what facilities form part of such a service.

Service providers were largely unfamiliar with the GIS and how it could be used. This often resulted in the provision of information that could not easily be entered into the GIS, thus forcing the research team to assess the information before including it in the data set. However, through a process of consultation, this problem was largely addressed and only relevant information was entered.

The format of information on services was often unsuitable for incorporation into the database. This meant the research team had to spend many hours converting the data into a suitable format. In addition, it was not always easy to enter digital or database information from other sources into the GIS, but eventually ways were found to transfer all the data into the GIS software.

Other aspects that plagued the project were inaccuracies in the different data sets, outdated databases and a lack of verified information. Producing maps from a GIS often makes it possible to identify inaccuracies in the information and make subsequent corrections. Experience suggests it is necessary to plan for such delays well in advance.

In solving these problems, the GIS team of the HSRC has added to its expertise in the fields of spatial database development and GIS research. As a result of this report there is now a comprehensive collection of spatial and attribute data related to service provision for census districts in the Free State. This database can be further developed, refined and provided to any organisation involved in service provision and development in the province.

# 5

# INFORMATION SOURCES

Research on providers of service information and literature reviews was conducted by members of the GIS Unit. All the major known service providers were contacted and appropriate data sources identified. Although attempts were made to obtain recent and comprehensive sources of information, it is acknowledged that more definitive databases may exist elsewhere in the country.

It must also be repeated that certain data sets may have inherent inaccuracies (see Introduction). However, what is important is that the information was obtained from the best known sources and, in some instances, the only known sources. The information is therefore considered the best base available for use by the RDP and from which more refined data can be gathered.

| SERVICE TYPE | SOURCE OF DATA | FORMAT AND LEVEL OF DATA | DATE CAPTURED | ORGANISATION |
|---|---|---|---|---|
| Demographic information | Spatial data captured from 1:50 000 (rural areas) and 1:6 000 (urban areas) Database extracted from 1991 Census | Digital data at census district level | 1991 | Human Sciences Research Council<br><br>CSS |
| Education facilities and indicators | Education Atlas of South Africa | Digital data at a census district level | 1994 | Education Foundation |
| Health facilities and utilisation | ReHMIS | Digital data at a point location level<br><br>Tabular data at health region level | 1994<br><br>1996 | Department of Health<br><br>Health Systems Trust |
| Poverty levels | 1991 Census Poverty database | Digital data at a census cistrict level | 1991 | Human Sciences Research Council |
| Post Office | Post Office: Sales & Marketing Department | Tables at a district level | 1994 | Post Office |
| Telephone lines | Telkom: Technology strategy | Tables of residential line shares at district level | 1995 | Telkom |
| Roads | Surveyor General | Line digital data | 1991 | Surveyor General |
| Water supply and sanitation | National Electrification Forum (NELF) | Digital data at a census district level | 1994 | Eskom |
| Electricity supply | National Electrification Forum (NELF) | Digital data at a census district level | 1994 | Eskom |
| Police facilities | SA Police Services | Tables at a magisterial district level | 1994 | SAPS |

# 6

# SOCIAL FACTORS HIGHLIGHTING THE NEED FOR SERVICES IN THE FREE STATE

## 6.1 Total population

### Introduction

This discussion on population dynamics in the Free State is broken down into the following sections: population policy and total population.

### Population policy

The Draft White Paper for a Population Policy published in September 1996 recognises the important interrelationship between population, development and the environment. It defines sustainable human development as "meeting the needs of the present generation and improving their quality of life without destroying the environment or depleting non-renewable natural resources, in order to avoid compromising the ability of future generations to meet their own needs" (Government Gazette 1996:7). Guided by this definition a number of population concerns and their underlying factors are identified. These population concerns cover four main areas:

- Lack of the availability, use and analysis of population data especially as related to development planning, as well as a lack of institutional and technical capacity for the analysis of population data and for integrated population and development planning.
- Problems related to characteristics of the population itself. These include the structure of the population, the high incidence of fertility and unwanted teenage pregnancies, and high rates of premature mortality, infant mortality and maternal mortality.
- The inadequate analysis of problems related to migration and settlement patterns such as the causes and consequences of urban and rural settlement patterns, as well as the nature and impact of international immigration.
- Problems related to population growth and population pressure in relation to the growth of the economy such as the backlog of social needs to be met, high levels of unemployment and the impact on the environment of population pressure and production and consumption patterns.

The Draft White Paper on Population recognises the link between factors such as poverty, high mortality rates, low status of women, a lack of democracy and high fertility on the one hand, and population growth rates on the other. Strategies have been adopted which will address these concerns. In the past, population policy was aimed mainly at fertility control, restricting migration and controlling settlement patterns. The new policy aims to address the problem of population pressure by influencing the determinants of high population growth through a wide range of strategies. These include reducing poverty, improving primary health care services, addressing environmental issues, promoting responsible and healthy sexual and reproductive behaviour in young people, improving education for all and through

improving the status of women. In order to reduce population pressure in both rural and urban areas the policy aims to provide improved social services, infrastructure and employment opportunities in rural areas through rural development. This should slow down the rapid rural-urban migration and improve the capacity of rural areas to provide a livelihood for people living there.

K.A. Leslie
Formerly of the University of Venda

## Total population

The population of the province is concentrated in four major population regions. These regions are the Bloemfontein/Botshabelo/Thaba 'Nchu region (BBT region), the Welkom/Odendaalsrus/Virginia (main centres in the Free State Goldfields) and Kroonstad region, Sasolburg and lastly the north eastern Free State that includes Bethlehem, Harrismith and Witsieshoek from the former QwaQwa. All the districts in these four regions have population sizes that exceed 60 000, thus accommodating 60% of the people in the Free State.

The above patterns of population distribution can probably be attributed to the following: administrative structures are mainly responsible for the relatively high populations in the Bloemfontein, Kroonstad and Bethlehem districts; mining and industry contribute to the high populations in the Welkom, Odendaalsrus, Virginia (all mining) and Sasolburg (industrial) districts; and the relatively high populations of Thaba 'Nchu, Botshabelo, Harrismith (Tshiame) and Witsieshoek result from the past apartheid strategy that aimed to exclude black people from so-called white areas.

Although agriculture plays a major role in the Free State, agricultural and climatic conditions vary within the region: the northern Free State is more suited to crop farming, while in the southern Free State stock farming is mainly practised. This is probably why all ten districts with a population of less than 11 000 people are found in the south-western Free State.

During the last 10 years the demographic growth points in the Free State shifted from the former homeland areas to the core areas of each district. In practice this has meant that former farm workers started to settle in informal settlements in the townships nearest them. For example, the population of Botshabelo increased by only 1,7% between 1988 and 1991, while Mangaung (the township next to Bloemfontein) experienced a growth rate of 6,6% during the same period. However, the opposite was found in Witsieshoek where an increase of 8,3% was registered between 1985 and 1991. Reasons for this phenomenon are still unclear.

L. Marais and E. Mbaza
Vista University

# MAP 1 : TOTAL POPULATION

Source : District Census 1991

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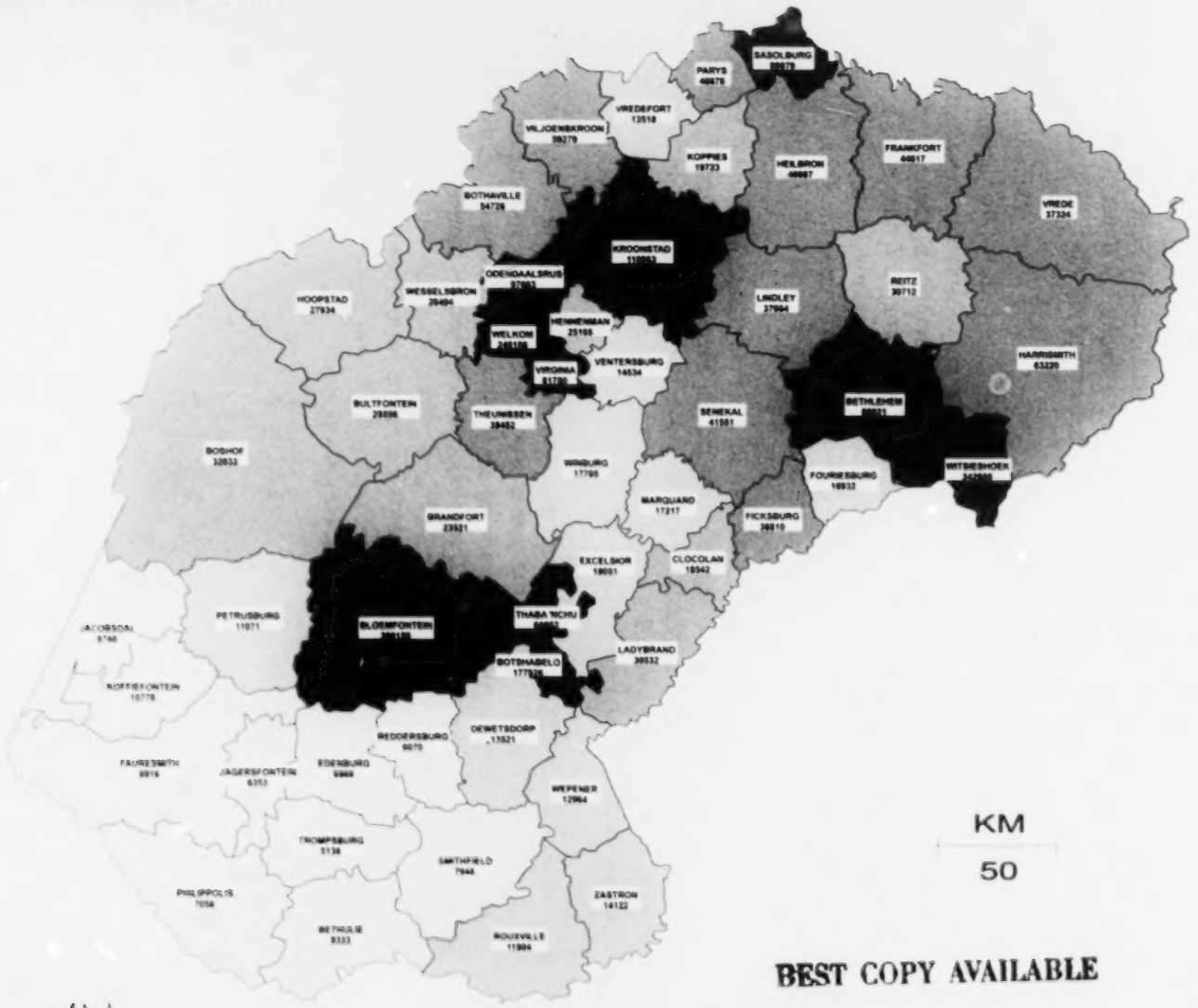


N

KM

50

## Total population

| |
|---|
| 5 138 to 10 778 |
| 10 779 to 18 051 |
| 18 052 to 32 033 |
| 32 034 to 63 220 |
| 63 221 to 342 886 |

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## Table 1: Total population

| DISTRICT | TOTAL POPULATION |
|---|---|
| Bethlehem | 80 921 |
| Bethulie | 9 333 |
| Bloemfontein | 300 150 |
| Boshof | 32 033 |
| Bothaville | 54 726 |
| Botshabelo | 177 926 |
| Brandfort | 23 521 |
| Bultfontein | 28 556 |
| Clocolan | 18 542 |
| Dewetsdorp | 13 521 |
| Edenburg | 6 968 |
| Excelsior | 18 051 |
| Fauresmith | 8 916 |
| Ficksburg | 36 810 |
| Fouriesburg | 16 932 |
| Frankfort | 44 617 |
| Harrismith | 63 220 |
| Heilbron | 40 987 |
| Hennenman | 25 165 |
| Hoopstad | 27 934 |
| Jacobsdal | 9 748 |
| Jagersfontein | 6 353 |
| Koffiefontein | 10 778 |
| Koppies | 19 723 |
| Kroonstad | 110 963 |
| Ladybrand | 30 532 |
| Lindley | 37 664 |
| Marquard | 17 217 |
| Odendaalsrus | 97 603 |
| Parys | 48 678 |
| Petrusburg | 11 071 |
| Philippolis | 7 056 |
| Reddersburg | 6 070 |
| Reitz | 30 712 |
| Rouxville | 11 904 |
| Sasolburg | 89 079 |
| Senekal | 41 551 |
| Smithfield | 7 946 |
| Thaba 'Nchu | 68 862 |
| Theunissen | 38 482 |
| Trompsburg | 5 138 |
| Ventersburg | 14 534 |
| Viljoenskroon | 59 279 |
| Virginia | 81 780 |
| Vrede | 37 324 |
| Vredefort | 13 518 |
| Welkom | 248 186 |
| Wepener | 12 964 |
| Wesselsbron | 26 494 |
| Winburg | 17 765 |
| Witsieshoek | 342 886 |
| Zastron | 14 122 |

## 6.2 Employment

### Assessment of the current situation

### Meeting basic needs through economic development

It is widely acknowledged among policy makers that for a country to be successful economically, that is to realise maximum economic growth and development, it should be able to participate successfully and competitively in the world economy. With greater access to the world trading area, South Africa has to ensure that it acts according to the rules of the international economy.

As emphasised by the government's macro-economic policy, South Africa has to mobilise all its energy in a new burst of economic activity. This requires breaking current constraints and catapulting the economy to the higher levels of growth, development and employment needed to provide a better life for the people. The ultimate aim is thus to increase the capacity of the people to take advantage of economic opportunities.

### Issues of importance to meet current and future needs

The following conditions have to be met at all times to ensure sustained economic growth and development through which the quality of life of the people can be promoted and enhanced: efficiency in production through economic liberalisation; economic stability and the successful implementation of strategic domestic policies on human resource development; restructuring of the economy; technology transfer; infrastructure development; employment creation, to stress only a few.

### Human resource development / capacity building

According to the World Competitive Reports of the last few years, the greatest limiting factor in South Africa's competitiveness is the shortage of capable, well-qualified human resources. The most recent report placed South Africa last in terms of human resource development. This is precisely the case if it is taken into account that companies on average spend a mere 2% of their income expenditure on training.

It is also interesting to note that countries such as Japan, Taiwan, Singapore, Korea and Hong Kong, which now lead the world in productivity and quality, have virtually no natural resources. They have gained their competitive edge through their people and have invested heavily in education and training and are reaping the rewards.

Hence, South Africa has to develop its work force and involve it more fully in the business of its employers. However decades of illiteracy and substandard education cannot be rectified overnight. Until these areas are improved, South Africa will remain at the bottom of the international competitiveness scale. A more detailed discussion on this follows.

### Technology transfer and enhancement

To be competitive in the world economy, one has to adopt improved production approaches and keep abreast of the latest changes. This is especially necessary for

some South African companies, which have remained frozen in their relative positions of the years of sanctions. Today companies are able to procure advanced technology either through direct purchasing or by joint ventures with foreign companies. The Free State Government therefore recognises the important role of technology transfer and/or advancement in making the province more competitive.

### Small and medium-sized business development

The promotion of small, medium and micro enterprises (SMMEs) is a key element in the government's strategy for employment creation and income generation. Owing to the obstacles of the past, the SMME sector is severely underdeveloped. A major effort will be made by the Free State Government to operationalise and implement the policies outlined in the White Paper on small business promotion.

### Infrastructure development

The macro-economic policy states clearly that investment in social and economic infrastructure will play an important role in increasing the productivity of labour and business and thus in the achievement of higher growth rates. These expenditures are aimed at improving the living conditions of the people and at increasing the attractiveness of South Africa to prospective investors.

Public infrastructure needs include the provision of domestic and industrial grid electricity and other energy projects as well as domestic, industrial and agricultural water supplies; sanitation, wastewater and stormwater disposal; the construction and maintenance of roads, railways, airports, harbours and pipelines; telecommunications and postal services and the provision of urban housing-related infrastructure; rural development; and the provision of hospitals, clinics and educational facilities.

Progress in all these areas will enhance the quality of life in communities, while simultaneously building productive economic capacity. The provision of basic household infrastructure, in particular, is a relatively low cost and effective form of public intervention in favour of the poor and is consistent with the reduction of income inequalities.

It should be noted that considerable progress has been made by the Free State Government with regard to service delivery, especially towards housing, health facilities, and community household infrastructure.

### Employment creation

Employment projections are sensitive to assumptions regarding real wage growth, easier access to formal job opportunities and accelerated programmes of small business and small farmer support. According to the macro-economic policy, a favourable employment response to accelerating growth, reinforced by effective public sector programmes, would see job creation rise from 126 000 to 400 000 per annum by the year 2000. The unemployment rate would then begin to show a visible decline. All the stakeholders in the nine provinces are therefore obliged to see to it that this employment target is reached by the year 2000. Individual efforts are therefore critical. While a great number of employment opportunities will be created through increased investment in the province, as well as by increased exports, the Free State Government by its individual effort will also make a sincere effort in this regard

through the Public Works Programme and the promotion of SMMEs, small farmers, and so on.

## Assessing the quality of life of people in the Free State

### Labour force participation rate

The participation rate reflects the percentage of people in the age group 15 to 64 years who are actually economically active. According to the map, the majority of the labour force in the Free State is found in the Goldfields region, with the highest concentration in Welkom (164 469). Large sections of the labour force are also found in Bloemfontein (141 031), Witsieshoek (82 969) and Botshabelo (67 934). According to the table, it seems that the overall participation rate in the Free State (65%) exceeds that of the country (58%). This can be accounted for by the high participation rates in the mining areas such as Welkom (83%), Odendaalsrus (74%) and Virginia (85%). These districts have most likely absorbed a large number of migrant workers, thus the high rates of participation. Other areas with high participation rates are Sasolburg (69%), Viljoenskroon (77%), Hennenman (73%) and Theunissen (80%).

The map shows relatively low participation rates for Witsieshoek and Thaba 'Nchu, 45% and 39% respectively. This can mainly be ascribed to the presence of migrant worker families resident in these areas while the breadwinners are employed elsewhere.

C. Oelofse
Department of Finance, Expenditure and Economic Affairs

# MAP 2 : PERCENTAGE 15 TO 64 YEAR OLDS EMPLOYED

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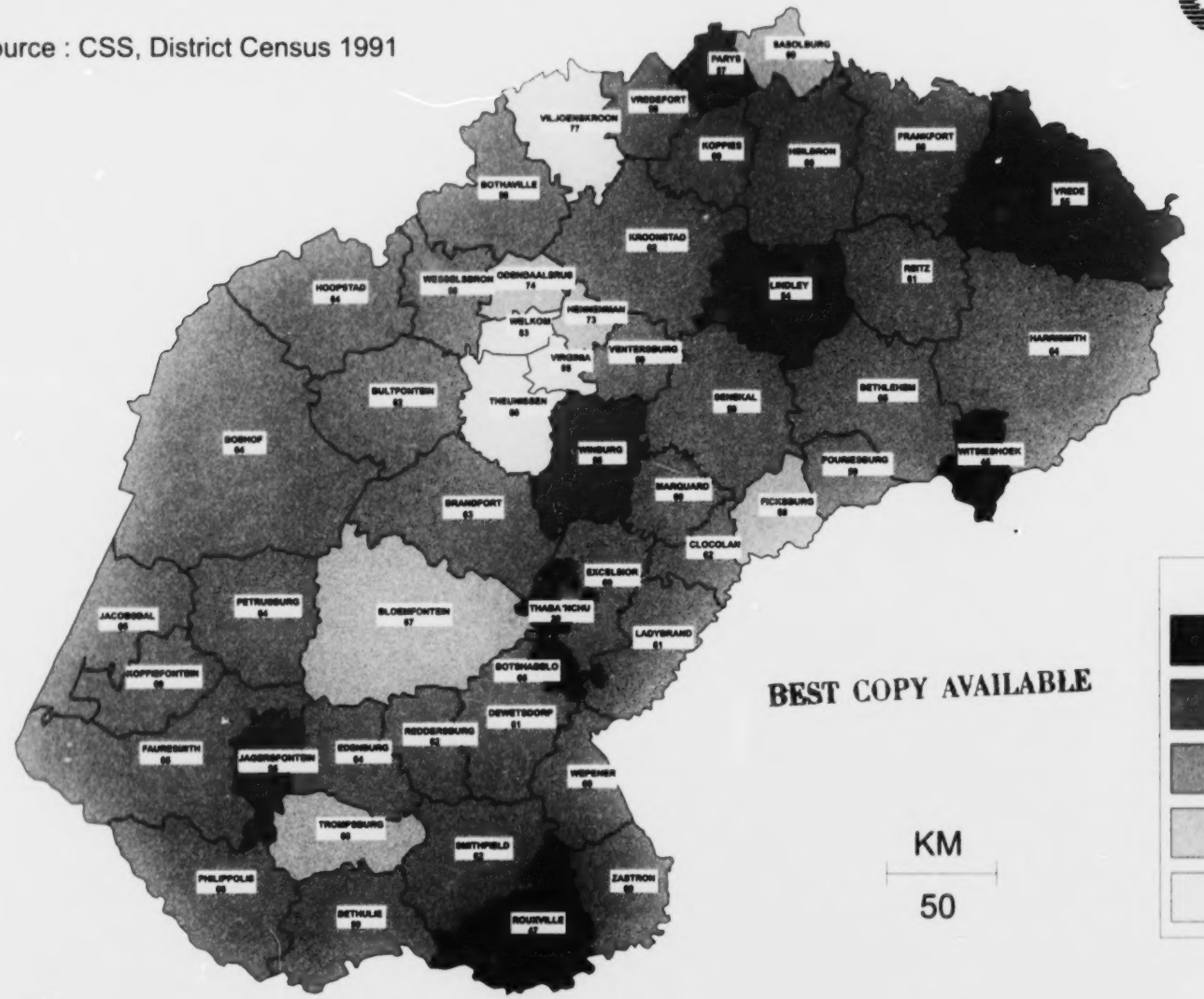
Source : CSS, District Census 1991

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## Table 2 Percentage 15 to 64 year olds employed

| DISTRICT | ECONOMICALLY ACTIVE | 15 TO 64 YEARS | % 15 TO 64 YEAR OLDS EMPLOYED |
|---|---|---|---|
| Bethlehem | 31 196 | 47 689 | 65 |
| Bethulie | 3 081 | 5 211 | 59 |
| Bloemfontein | 141 031 | 210 132 | 67 |
| Boshof | 11 180 | 17 379 | 64 |
| Bothaville | 17 546 | 30 390 | 58 |
| Botshabelo | 67 934 | 104 989 | 65 |
| Brandfort | 8 293 | 13 164 | 63 |
| Bultfontein | 9 745 | 15 685 | 62 |
| Clocolan | 6 253 | 10 015 | 62 |
| Dewetsdorp | 4 356 | 7 103 | 61 |
| Edenburg | 2 402 | 3 750 | 64 |
| Excelsior | 5 738 | 9 603 | 60 |
| Fauresmith | 3 462 | 5 342 | 65 |
| Ficksburg | 14 110 | 20 698 | 68 |
| Fouriesburg | 5 001 | 8 526 | 59 |
| Frankfort | 13 945 | 24 016 | 58 |
| Harrismith | 23 108 | 35 861 | 64 |
| Heilbron | 13 230 | 22 167 | 60 |
| Hennenman | 12 710 | 17 363 | 73 |
| Hoopstad | 9 287 | 14 592 | 64 |
| Jacobsdal | 3 762 | 5 795 | 65 |
| Jagersfontein | 2 057 | 3 729 | 55 |
| Koffiefontein | 3 881 | 6 438 | 60 |
| Koppies | 6 445 | 10 761 | 60 |
| Kroonstad | 42 955 | 68 761 | 62 |
| Ladybrand | 10 187 | 16 573 | 61 |
| Lindley | 10 353 | 19 070 | 54 |
| Marquard | 5 207 | 8 737 | 60 |
| Odendaalsrus | 52 575 | 70 699 | 74 |
| Parys | 16 910 | 29 697 | 57 |
| Petrusburg | 3 878 | 6 045 | 64 |
| Philippolis | 2 705 | 4 085 | 66 |
| Reddersburg | 1 909 | 3 070 | 62 |
| Reitz | 10 013 | 16 413 | 61 |
| Rouxville | 3 450 | 7 328 | 47 |
| Sasolburg | 43 290 | 63 015 | 69 |
| Senekal | 12 724 | 21 458 | 59 |
| Smithfield | 2 575 | 4 138 | 62 |
| Thaba 'Nchu | 15 777 | 40 789 | 39 |
| Theunissen | 23 015 | 28 854 | 80 |
| Trompsburg | 1 939 | 2 870 | 68 |
| Ventersburg | 4 751 | 8 004 | 59 |
| Viljoenskroon | 32 758 | 42 463 | 77 |
| Virginia | 57 334 | 67 143 | 85 |
| Vrede | 10 745 | 19 620 | 55 |
| Vredefort | 4 295 | 7 448 | 58 |
| Welkom | 164 469 | 199 223 | 83 |
| Wepener | 4 352 | 7 306 | 60 |
| Wesselsbron | 8 639 | 14 848 | 58 |
| Winburg | 5 276 | 9 578 | 55 |
| Witsieshoek | 82 969 | 183 400 | 45 |
| Zastron | 4 555 | 7 646 | 60 |

## 6.3 Functional literacy

The data on functional literacy take the population with at least Standard 4 as a percentage of the entire population. Since Bloemfontein, Welkom and Sasolburg are the more industrialised areas of the Free State, requiring a higher level of literacy to get a job may be the reason for the higher concentration of functionally literate people in this area. In the majority of mainly farming districts, where literacy is not a requirement to get a job as a farm labourer, literacy levels are low. The low literacy in the Western Free State farming areas of Hoopstad and Boshof is very disturbing. Similarly, in the east and south in the farming districts Vrede, Reitz, Rouxville, Dewetsdorp, Marquard and Fouriesburg literacy is also low.

The need for literacy and adult basic education programmes in the majority of districts in the Free State is obvious and special attention should be devoted to this problem.

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University of the Free State

# MAP 3 : PERCENTAGE FUNCTIONAL LITERACY : ADULTS WITH AT LEAST STANDARD 4 EDUCATION

Source : CSS, District Census 1991

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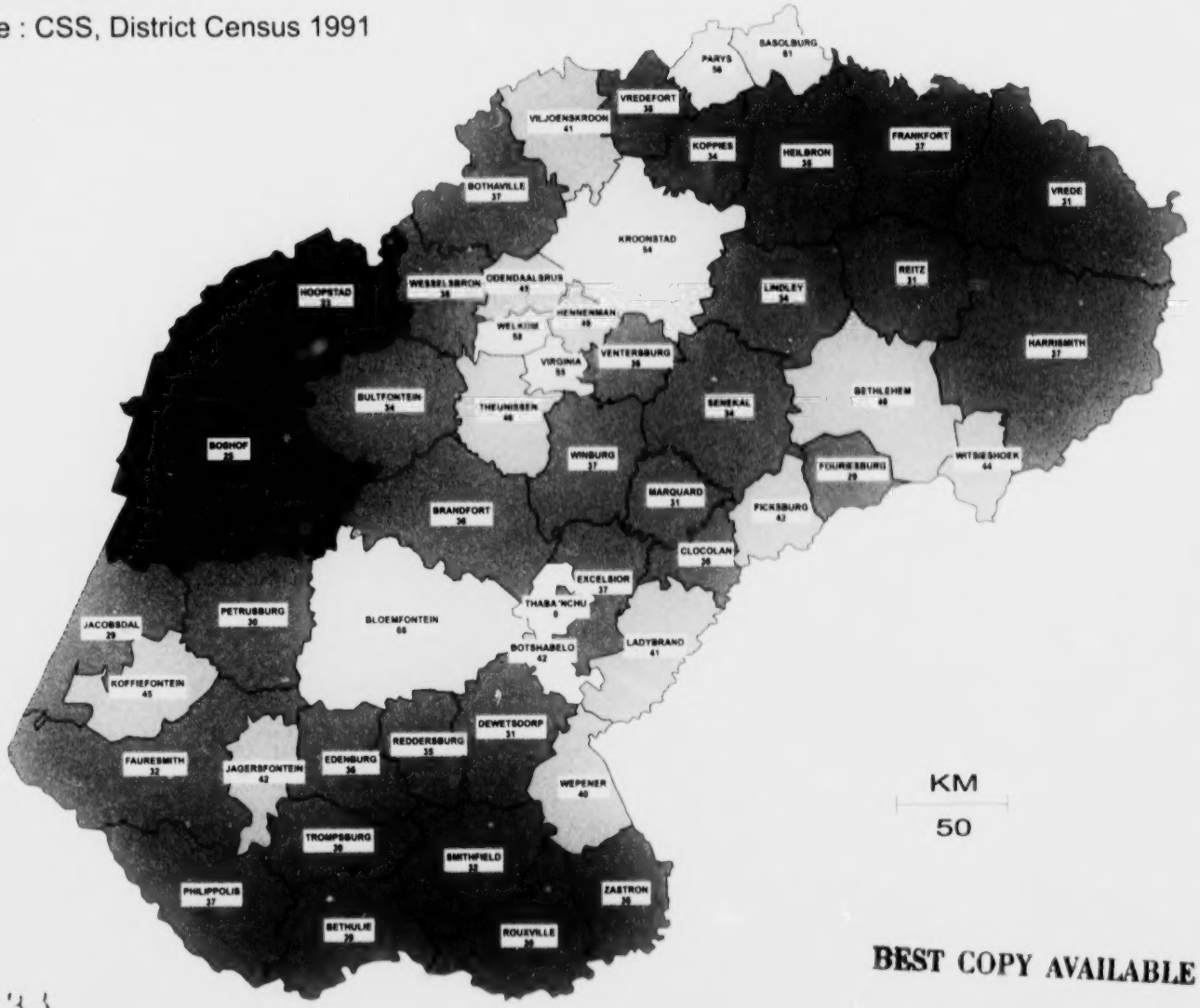


N

% Functional literacy

| | |
|---|---|
| | No data |
| | 13 to 26 |
| | 26 to 40 |
| | 40 to 53 |
| | 53 to 66 |

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## Table 3: Percentage functional literacy: Adults with at least Standard 4 education

| DISTRICT | 15 TO 64 YEARS | % FUNCTIONAL LITERACY |
|---|---|---|
| Bethlehem | 47 689 | 46 |
| Bethulie | 5 211 | 39 |
| Bloemfontein | 210 132 | 66 |
| Boshof | 17 379 | 25 |
| Bothaville | 30 390 | 37 |
| Botshabelo | 104 989 | 42 |
| Brandfort | 13 164 | 36 |
| Bultfontein | 15 685 | 34 |
| Clocolan | 10 015 | 36 |
| Dewetsdorp | 7 103 | 31 |
| Edenburg | 3 750 | 36 |
| Excelsior | 9 603 | 37 |
| Fauresmith | 5 342 | 32 |
| Ficksburg | 20 698 | 42 |
| Fouriesburg | 8 526 | 29 |
| Frankfort | 24 016 | 37 |
| Harrismith | 35 861 | 37 |
| Heilbron | 22 167 | 35 |
| Hennenman | 17 363 | 49 |
| Hoopstad | 14 592 | 23 |
| Jacobsdal | 5 795 | 29 |
| Jagersfontein | 3 729 | 42 |
| Koffiefontein | 6 438 | 45 |
| Koppies | 10 761 | 34 |
| Kroonstad | 68 761 | 54 |
| Ladybrand | 16 573 | 41 |
| Lindley | 19 070 | 34 |
| Marquard | 8 737 | 31 |
| Odendaalsrus | 70 699 | 45 |
| Parys | 29 697 | 56 |
| Petrusburg | 6 045 | 30 |
| Philippolis | 4 085 | 37 |
| Reddersburg | 3 070 | 35 |
| Reitz | 16 413 | 31 |
| Rouxville | 7 328 | 30 |
| Sasolburg | 63 015 | 61 |
| Senekal | 21 458 | 34 |
| Smithfield | 4 138 | 32 |
| Thaba 'Nchu | 40 789 | 0 |
| Theunissen | 28 854 | 46 |
| Trompsburg | 2 870 | 39 |
| Ventersburg | 8 004 | 36 |
| Viljoenskroon | 42 463 | 41 |
| Virginia | 67 143 | 55 |
| Vrede | 19 620 | 31 |
| Vredefort | 7 448 | 38 |
| Welkom | 199 223 | 58 |
| Wepener | 7 306 | 40 |
| Wesselsbron | 14 848 | 38 |
| Winburg | 9 578 | 37 |
| Witsieshoek | 183 400 | 44 |
| Zastron | 7 646 | 36 |

## 6.4 Poverty gap

### Assessing the quality of life of people in the Free State

"The simplest measure of poverty of a region is the number of households living in poverty. While the poverty headcount ratio is a convenient measure of poverty, it is insufficient as it gives only an indication of the incidence of poverty. A reliable measure of poverty should also encapsulate the depth of poverty. In other words we are interested not only in the proportion of households below the poverty line, but also how far those households are below the poverty line. A measure that incorporates both incidence and depth is the poverty gap, which is calculated by summing the differences between the income of each poor household and the poverty line. The poverty gap is of great policy significance since it indicates the theoretical minimum government transfer to poor households needed to totally eliminate poverty. Of course, transfers are only one anti-poverty policy option available to governments. Income generating opportunities for poor people have to be created and those people provided with the capacity to use the opportunities" (Whiteford *et al.*, 1995:8).

It is however, important to note that poverty encompasses much more than just a lack of income. It also involves poor or no access to basic needs such as health facilities, clean water, educational institutions, etc. Since income is perhaps the most important aspect, it will be used as a proxy to analyse the poverty situation in the Free State population. The poverty gap measures how far each poor household is below the poverty line, and reflects how much money is needed to bring the income of all poor households above the poverty line. "A poverty line of R840 per month is applicable for a household consisting of two adults and three children in urban areas, while for rural areas it is R740" (Whiteford, *et al.*, 1995:2).

Considering the ranges for the two highest levels of poverty per capita shown on the map, poverty is widespread in the Free State. High poverty regions surround a few major growth points such as Bloemfontein, Welkom and Sasolburg. The highest levels are in the southern regions around Bloemfontein. There is a sudden increase in the level of poverty as one moves from the urban to the rural areas. This may well be an indicator of differences in wages between the secondary, tertiary and agricultural sectors.

On the other hand, the worst levels of poverty are found in the eastern Free State where Witsieshoek is the poorest. The poverty gap in this region amounts to approximately R410 million a year. The second poorest region in terms of the poverty gap is the Bloemfontein area, which incorporates part of the former Bophuthatswana. The highest poverty levels in this region are found in Bloemfontein (R111 792) and Botshabelo (R86 487). The Welkom area recorded the second lowest poverty levels. Welkom, Odendaalsrus and Bothaville recorded the highest incidence of poverty in this region - R43 006, R35 128 and R33 098 respectively.

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Department of Finance, Expenditure and Economic Affairs

# MAP 4 : POVERTY GAP PER CAPITA

Source : Whiteford et al, 1995

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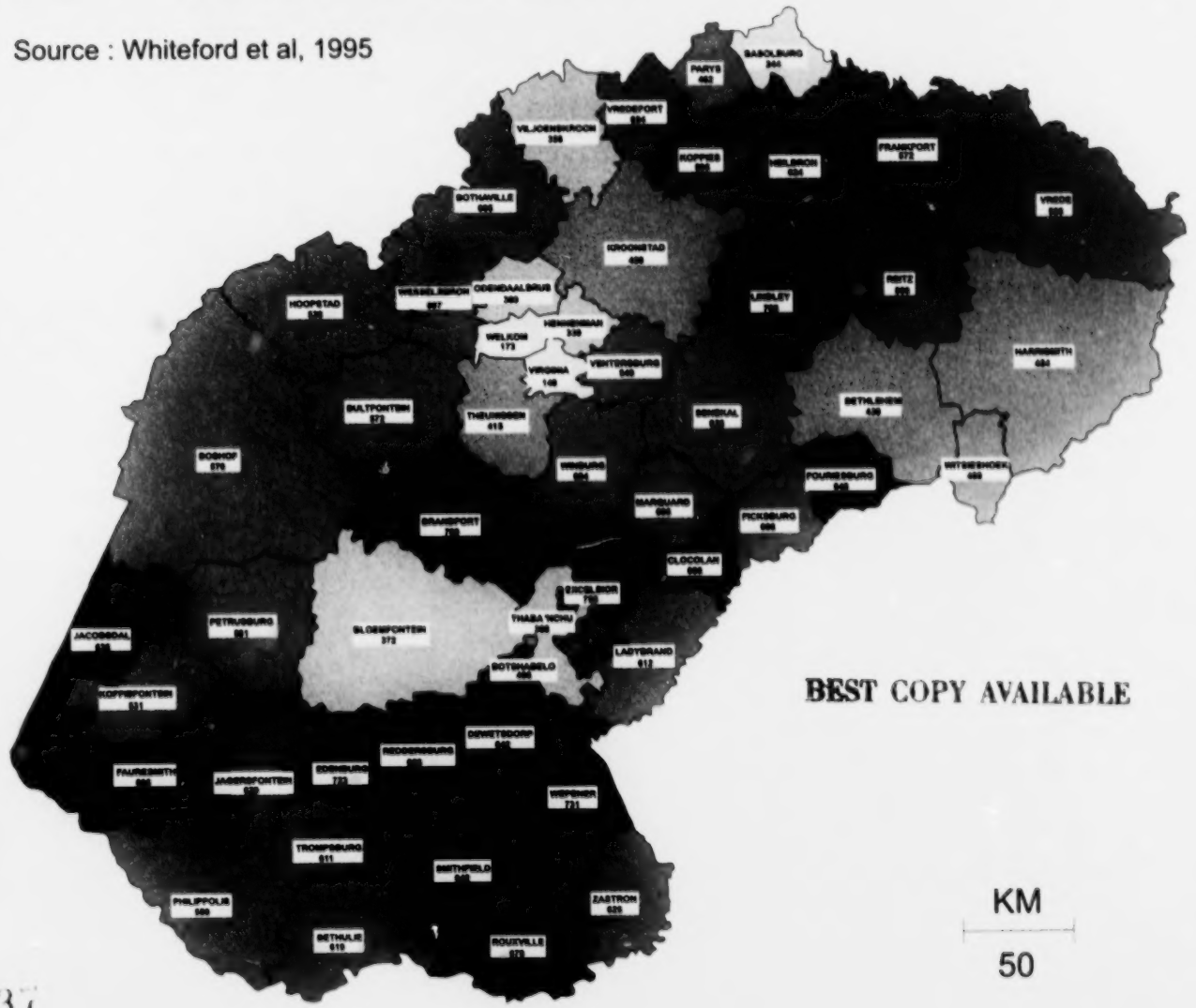


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N

Poverty gap (R's)

| | | | |
|---|---|---|---|
| 148 | to | 269 |
| 269 | to | 391 |
| 391 | to | 512 |
| 512 | to | 634 |
| 634 | to | 755 |

## Table 4: Poverty gap

| DISTRICT | TOTAL POPULATION | POVERTY GAP (R1000) | PER CAPITA POVERTY GAP (R) |
|---|---|---|---|
| Bethlehem | 80 921 | 35 476 | 438 |
| Bethulie | 9 333 | 5 778 | 619 |
| Bloemfontein | 300 150 | 111 792 | 372 |
| Boshof | 32 033 | 18 257 | 570 |
| Bothaville | 54 726 | 33 098 | 605 |
| Botshabelo | 177 926 | 86 487 | 486 |
| Brandfort | 23 521 | 16 455 | 700 |
| Bultfontein | 28 556 | 16 329 | 572 |
| Clocolan | 18 542 | 12 766 | 688 |
| Dewetsdorp | 13 521 | 8 686 | 642 |
| Edenburg | 6 968 | 5 037 | 723 |
| Excelsior | 18 051 | 13 631 | 755 |
| Fauresmith | 8 916 | 6 111 | 685 |
| Ficksburg | 36 810 | 22 320 | 606 |
| Fouriesburg | 16 932 | 10 966 | 648 |
| Frankfort | 44 617 | 25 540 | 572 |
| Harrismith | 63 220 | 28 709 | 454 |
| Heilbron | 40 987 | 25 581 | 624 |
| Hennenman | 25 165 | 8 527 | 339 |
| Hoopstad | 27 934 | 14 747 | 528 |
| Jacobsdal | 9 748 | 6 202 | 636 |
| Jagersfontein | 6 353 | 3 994 | 629 |
| Koffiefontein | 10 778 | 5 720 | 531 |
| Koppies | 19 723 | 11 739 | 595 |
| Kroonstad | 110 963 | 49 966 | 450 |
| Ladybrand | 30 532 | 18 700 | 612 |
| Lindley | 37 664 | 26 580 | 706 |
| Marquard | 17 217 | 10 413 | 605 |
| Odendaalsrus | 97 603 | 35 128 | 360 |
| Parys | 48 678 | 22 509 | 462 |
| Petrusburg | 11 071 | 6 435 | 581 |
| Philippolis | 7 056 | 3 882 | 550 |
| Reddersburg | 6 070 | 3 983 | 656 |
| Reitz | 30 712 | 17 208 | 560 |
| Rouxville | 11 904 | 7 972 | 670 |
| Sasolburg | 89 079 | 21 702 | 244 |
| Senekal | 41 551 | 26 025 | 626 |
| Smithfield | 7 946 | 5 102 | 642 |
| Thaba 'Nchu | 68 862 | 25 352 | 368 |
| Theunissen | 38 482 | 15 962 | 415 |
| Trompsburg | 5 138 | 3 139 | 611 |
| Ventersburg | 14 534 | 7 972 | 549 |
| Viljoenskroon | 59 279 | 21 088 | 356 |
| Virginia | 81 780 | 12 089 | 148 |
| Vrede | 37 324 | 19 707 | 528 |
| Vredefort | 13 518 | 8 441 | 624 |
| Welkom | 248 186 | 43 006 | 173 |
| Wepener | 12 964 | 9 480 | 731 |
| Wesselsbron | 26 494 | 16 092 | 607 |
| Winburg | 17 765 | 10 730 | 604 |
| Witsieshoek | 342 886 | 167 358 | 488 |
| Zastron | 14 122 | 8 825 | 625 |

## 6.5 Dependency ratio

### Assessing the quality of life of people in the Free State

Communities with high population growth normally have youthful populations, which in general translates to high dependency ratios. This has a very negative influence on economic and social development as it means that a relatively small number of people have to support a great number of people. Thus it is often very difficult to enhance the quality of life of such communities.

During 1991 each economically active person in the Free State had to support 1,4 other people on average, while the average for South Africa was approximately 2,0. However, one has to take into account the effect of migrant workers on the ratio, since this could understate the average dependency ratio of the Free State. The table shows that the dependency ratios for Witsieshoek and Thaba 'Nchu are very high, in fact the highest recorded ratios for the Free State. The reason for this is the absence of income-earning individuals from the region, that is low labour force participation in these areas.

According to the table and map the dependency ratios in the Welkom area are quite low: 0,4, 0,5 and 0,9 respectively in Virginia, Welkom and Odendaalsrus. There ratios reflect the high proportion of economically active people in the area. The Bloemfontein area and the eastern Free State show average dependency ratios above 2,0 that correspond with the relatively lower participation rates. The table also shows that the major urban areas have lower dependency ratios than most of the rural areas.

The dependency ratio must be compared and interpreted with caution, since it does not take into account whether the economically active person is actually employed or not. The unemployment figures should therefore be considered together with the dependency ratio before any conclusions are drawn.

C. Oelofse
Department of Finance, Expenditure and Economic Affairs

# MAP 5 : DEPENDENCY RATIO

Source : CSS, District Census 1991

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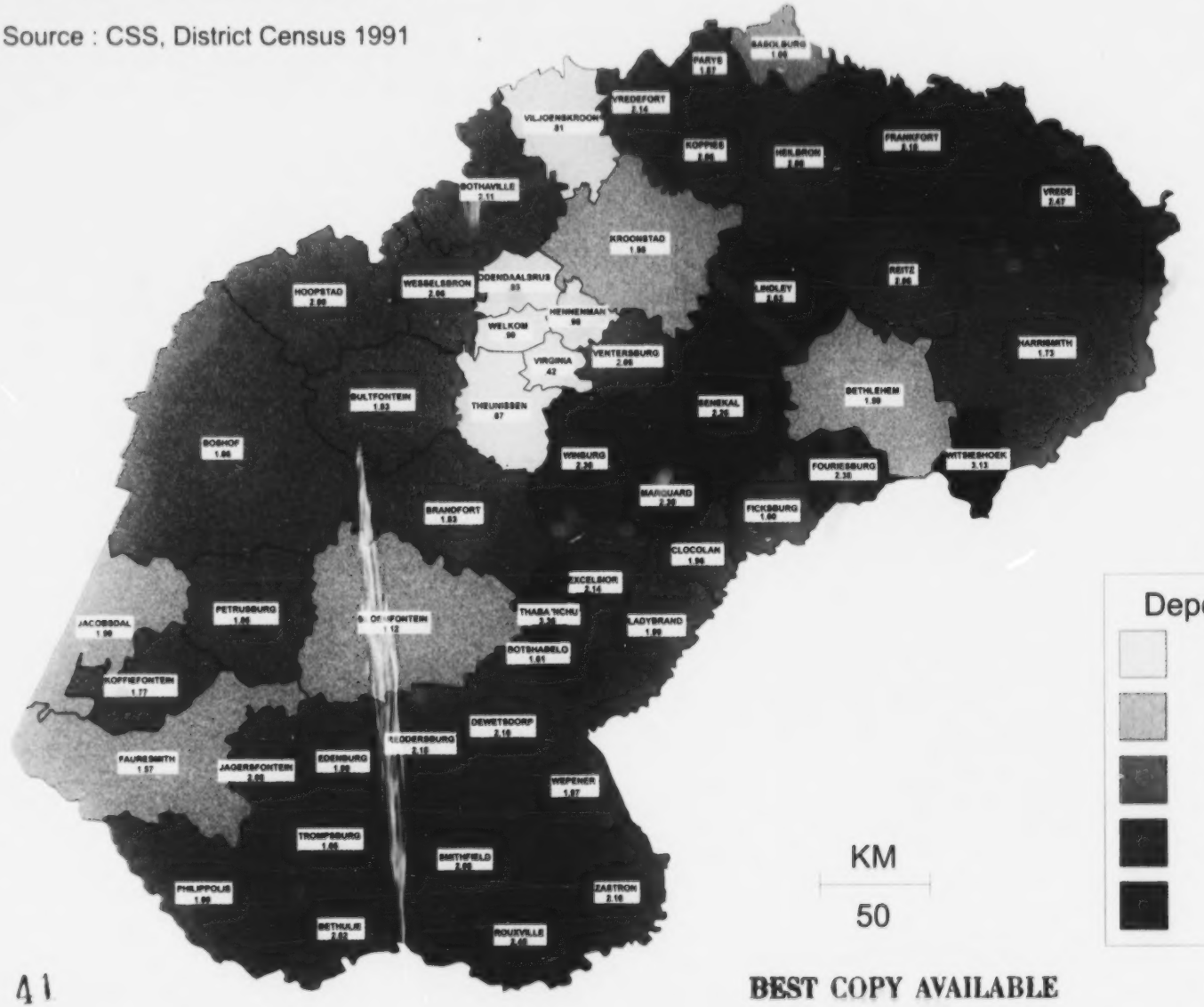


## Dependency ratio

| | | | |
|---|---|---|---|
| | ,4 | to | 1,0 |
| | 1,0 | to | 1,6 |
| | 1,6 | to | 2,1 |
| | 2,1 | to | 2,7 |
| | 2,7 | to | 3,3 |



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## Table 5: Dependency ratio

| DISTRICT | TOTAL POPULATION | ECONOMICALLY ACTIVE POPULATION | DEPENDENCY RATIO |
|---|---|---|---|
| Bethlehem | 80 921 | 31 196 | 1,59 |
| Bethulie | 9 333 | 3 081 | 2,03 |
| Bloemfontein | 300 150 | 141 031 | 1,13 |
| Boshof | 32 033 | 11 180 | 1,87 |
| Bothaville | 54 726 | 17 546 | 2,12 |
| Botshabelo | 23 521 | 8 293 | 1,84 |
| Brandfort | 177 926 | 67 934 | 1,62 |
| Bultfontein | 28 556 | 9 745 | 1,93 |
| Clocolan | 18 542 | 6 253 | 1,97 |
| Dewetsdorp | 13 521 | 4 356 | 2,10 |
| Edenburg | 6 968 | 2 402 | 1,90 |
| Excelsior | 18 051 | 5 738 | 2,15 |
| Fauresmith | 8 916 | 3 462 | 1,58 |
| Ficksburg | 36 810 | 14 110 | 1,61 |
| Fouriesburg | 16 932 | 5 001 | 2,39 |
| Frankfort | 44 617 | 13 945 | 2,20 |
| Harrismith | 63 220 | 23 108 | 1,74 |
| Heilbron | 40 987 | 13 230 | 2,10 |
| Hennenman | 25 165 | 12 710 | 0,98 |
| Hoopstad | 27 934 | 9 287 | 2,01 |
| Jacobsdal | 9 748 | 3 762 | 1,59 |
| Jagersfontein | 6 353 | 2 057 | 2,09 |
| Koffiefontein | 10 778 | 3 881 | 1,78 |
| Koppies | 19 723 | 6 445 | 2,06 |
| Kroonstad | 110 963 | 42 955 | 1,58 |
| Ladybrand | 30 532 | 10 187 | 2,00 |
| Lindley | 37 664 | 10 353 | 2,64 |
| Marquard | 17 217 | 5 207 | 2,31 |
| Odendaalsrus | 97 603 | 52 575 | 0,86 |
| Parys | 48 678 | 16 910 | 1,88 |
| Petrusburg | 11 071 | 3 878 | 1,85 |
| Philippolis | 7 056 | 2 705 | 1,61 |
| Reddersburg | 6 070 | 1 909 | 2,18 |
| Reitz | 30 712 | 10 013 | 2,07 |
| Rouxville | 11 904 | 3 450 | 2,45 |
| Sasolburg | 89 079 | 43 290 | 1,06 |
| Senekal | 41 551 | 12 724 | 2,27 |
| Smithfield | 7 946 | 2 575 | 2,09 |
| Thaba 'Nchu | 68 862 | 15 777 | 3,36 |
| Theunissen | 38 482 | 23 015 | 0,67 |
| Trompsburg | 5 138 | 1 939 | 1,65 |
| Ventersburg | 14 534 | 4 751 | 2,06 |
| Viljoenskroon | 59 279 | 32 758 | 0,81 |
| Virginia | 81 780 | 57 334 | 0,43 |
| Vrede | 37 324 | 10 745 | 2,47 |
| Vredefort | 13 518 | 4 295 | 2,15 |
| Welkom | 248 186 | 164 469 | 0,51 |
| Wepener | 12 964 | 4 352 | 1,98 |
| Wesselsbron | 26 494 | 8 639 | 2,07 |
| Winburg | 17 765 | 5 276 | 2,37 |
| Witsieshoek | 342 886 | 82 969 | 3,13 |
| Zastron | 14 122 | 4 555 | 2,10 |

## 6.6 Population density

### Introduction

This discussion on population dynamics in the Free State is broken down into the following sections: population density and issues relevant to meeting the needs of future population pressure.

### Population density

According to the map, the highest densities in the Free State are found in the former homeland areas (Witsieshoek, Botshabelo, and Thaba 'Nchu). The densities in Witsieshoek and Botshabelo exceed the provincial average of nearly 20 persons per square kilometre for the same year. The apartheid strategy which kept black people out of so-called white areas is the main reason for this phenomenon as it resulted in large numbers of people being located on relatively small pieces of land. The mining and industrial districts of Welkom, Virginia, Odendaalsrus and Sasolburg also have high densities, while Bloemfontein, mainly an administrative centre, is also relatively densely populated. The relatively high density in the Ficksburg district is the result of the town's proximity to the Lesotho border and Maputsoe on the other side of the border.

Most of the low density districts are found in the south-western districts where stock-based agriculture is the main economic activity.

L. Marais and E. Mbaza
Vista University

### Issues relevant to meeting the needs of future population pressure

- **Migration patterns**

"The most important underlying factors for the high rate of migration were the forced removals of African people from the commercial farms to the homelands from the 1960s until the early 1990s, and the continuing migrant labour system. This latter has traditionally been selective of able-bodied persons, primarily males, from the economically depressed provinces and rural areas to the industrial and urban centres in search of employment and other opportunities for a better life. In addition, there is considerable movement of people between rural and urban areas, sometimes for long periods" (*Government Gazette* 1996:18).

According to Krige (1996) the focus of future population growth in the Free State was on urban areas as up to 50% of all rural people on commercial farms had exchanged farm life for life in urban areas (especially township) between 1991 and 1995. The bigger urban areas especially were the focus of rapid population growth, for example Bloemfontein, Free State Goldfields, Kroonstad, Bethlehem and Sasolburg.

There was a drop in population growth rates in the former homeland areas especially in Botshabelo which was approaching zero population growth (Krige, 1996).

- **Places of attraction**

The Free State Goldfields, as the economic heartland of the province, is a major settlement area for newcomers in search of employment. Those retrenched do not necessarily return home.

Bloemfontein is increasingly accommodating people from Botshabelo who prefer to settle closer to employment areas.

- **Border with Lesotho**

The border with Lesotho may become increasingly important as Lesotho's future development scenario becomes bleaker.

- **Increasing unemployment in all urban areas**

All urban areas have experienced rapid population growth over the last 10 years. Farm life with economic security but little social security has been exchanged for life in the townships where little (or no) economic security exists, but social security is a major attraction. There are few employment opportunities for the vast number of new urbanites especially in the small towns.

- **Inefficient management and inadequate financial resources in urban areas**

It is a fact that the management systems in urban areas are coming under increasing pressure as population growth rates increase. Similarly, the financial resources of urban areas are also under increasing pressure. This may result in mounting frustration for the community with possible negative results.

S. Krige
University of the Free State

# MAP 6 : POPULATION DENSITY

Source : CSS, District Census 1991

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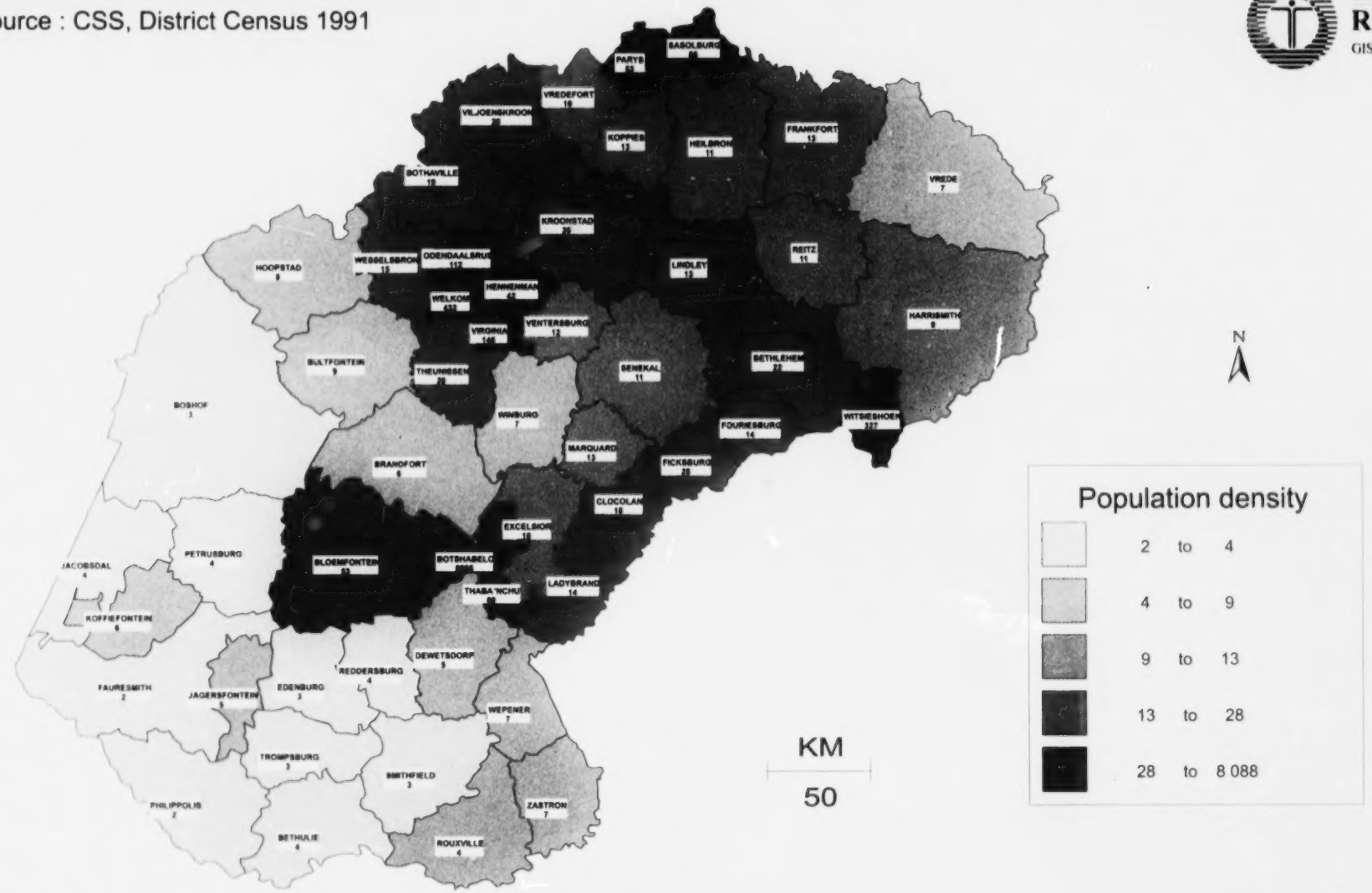

## Table 6: Population density

| DISTRICT | TOTAL POPULATION | AREA ($KM^2$) | POPULATION DENSITY |
|---|---|---|---|
| Bethlehem | 80 921 | 3 671 | 22,0 |
| Bethulie | 9 333 | 2 600 | 3,6 |
| Bloemfontein | 300 150 | 5 649 | 53,1 |
| Botshabelo | 177 926 | 22 | 8087,5 |
| Boshof | 32 033 | 9 431 | 3,4 |
| Bothaville | 54 726 | 2 859 | 19,1 |
| Brandfort | 23 521 | 3 851 | 6,1 |
| Bultfontein | 28 556 | 3 158 | 9,0 |
| Clocolan | 18 542 | 1 058 | 17,5 |
| Dewetsdorp | 13 521 | 2 502 | 5,4 |
| Edenburg | 6 968 | 2 058 | 3,4 |
| Excelsior | 18 051 | 1 878 | 9,6 |
| Fauresmith | 8 916 | 4 962 | 1,8 |
| Ficksburg | 36 810 | 1 304 | 28,2 |
| Fouriesburg | 16 932 | 1 180 | 14,3 |
| Frankfort | 44 617 | 3 445 | 13,0 |
| Harrismith | 63 220 | 6 927 | 9,1 |
| Heilbron | 40 987 | 3 608 | 11,4 |
| Hennenman | 25 165 | 593 | 42,4 |
| Hoopstad | 27 934 | 3 594 | 7,8 |
| Jacobsdal | 9 748 | 2 569 | 3,8 |
| Jagersfontein | 6 353 | 1 234 | 5,1 |
| Koffiefontein | 10 778 | 1 905 | 5,7 |
| Koppies | 19 723 | 1 559 | 12,7 |
| Kroonstad | 110 963 | 4 254 | 26,1 |
| Ladybrand | 30 532 | 2 182 | 14,0 |
| Lindley | 37 664 | 2 841 | 13,3 |
| Marquard | 17 217 | 1 342 | 12,8 |
| Odendaalsrus | 97 603 | 872 | 111,9 |
| Parys | 48 678 | 926 | 52,6 |
| Petrusburg | 11 071 | 2 958 | 3,7 |
| Philippolis | 7 056 | 3 451 | 2,0 |
| Reddersburg | 6 070 | 1 532 | 4,0 |
| Reitz | 30 712 | 2 720 | 11,3 |
| Rouxville | 11 904 | 2 791 | 4,3 |
| Sasolburg | 89 079 | 1 038 | 85,8 |
| Senekal | 41 551 | 3 619 | 11,5 |
| Smithfield | 7 946 | 2 861 | 2,8 |
| Thaba 'Nchu | 68 862 | 1 155 | 59,6 |
| Theunissen | 38 482 | 1 881 | 20,5 |
| Trompsburg | 5 138 | 1 936 | 2,7 |
| Ventersburg | 14 534 | 1 246 | 11,7 |
| Viljoenskroon | 59 279 | 2 121 | 27,9 |
| Virginia | 81 780 | 561 | 145,8 |
| Vrede | 37 324 | 5 485 | 6,8 |
| Vredefort | 13 518 | 1 392 | 9,7 |
| Welkom | 248 186 | 574 | 432,4 |
| Wepener | 12 964 | 1 756 | 7,4 |
| Wesselsbron | 26 494 | 1 743 | 15,2 |
| Winburg | 17 765 | 2 450 | 7,3 |
| Witsieshoek | 342 886 | 1 047 | 327,5 |
| Zastron | 14 122 | 1 921 | 7,4 |

## 6.7 Index of Social Needs

As outlined in Section 4.2, high index scores are indicators of underdevelopment. The social variables selected to develop the Needs Index were the poverty gap, pupil:teacher ratio, dependency ratio, total households, and population density. A district not requiring development intervention based on this social needs index would have a low index score and the following social profile: a low poverty gap, low pupil:teacher ratio, low dependency ratio, low population densities and a high number of households. Conversely an underdeveloped district would have a high poverty gap, high pupil:teacher ratio, high dependency ratio, high population densities and a low number of households.

According to the map there is an overall deterioration of social conditions from the south to the north of the Free State. Table 7 lists districts in descending order, from the most underdeveloped to the more developed. The southern districts, relative to the rest of the Free State, have better social conditions. With few exceptions, the southern districts fall into the lower two ranges between 26 and 48 index points. Jagersfontein has far worse social conditions than all its neighbouring districts and differs from them by at least 18 index points. Botshabelo, Thaba 'Nchu and Zastron are also less developed than their neighbours. Social conditions in Botshabelo are worse than in Bloemfontein by 23 index points.

There is a band of underdeveloped districts in the centre of the province that extends from Fouriesburg in the east to Hoopstad in the west, excepting for two districts: Welkom and Virginia. Social conditions are between 12 and 21 index points better in Welkom and Virginia than in the surrounding districts.

There is another band of underdeveloped districts also extending from Fouriesburg and Witsieshoek in the east to Parys in the north. Nearly all these districts fall into the most underdeveloped index range of between 61 and 70 points. This band has far worse social conditions than the Fouriesburg-Hoopstad band.

These two underdeveloped bands of districts account for the bulk of the central, northern and eastern districts. The better developed districts within these bands are Welkom, Virginia, Viljoenskroon, Kroonstad, Sasolburg, Bethlehem and Harrismith.

# MAP 7 : INDEX OF SOCIAL NEED

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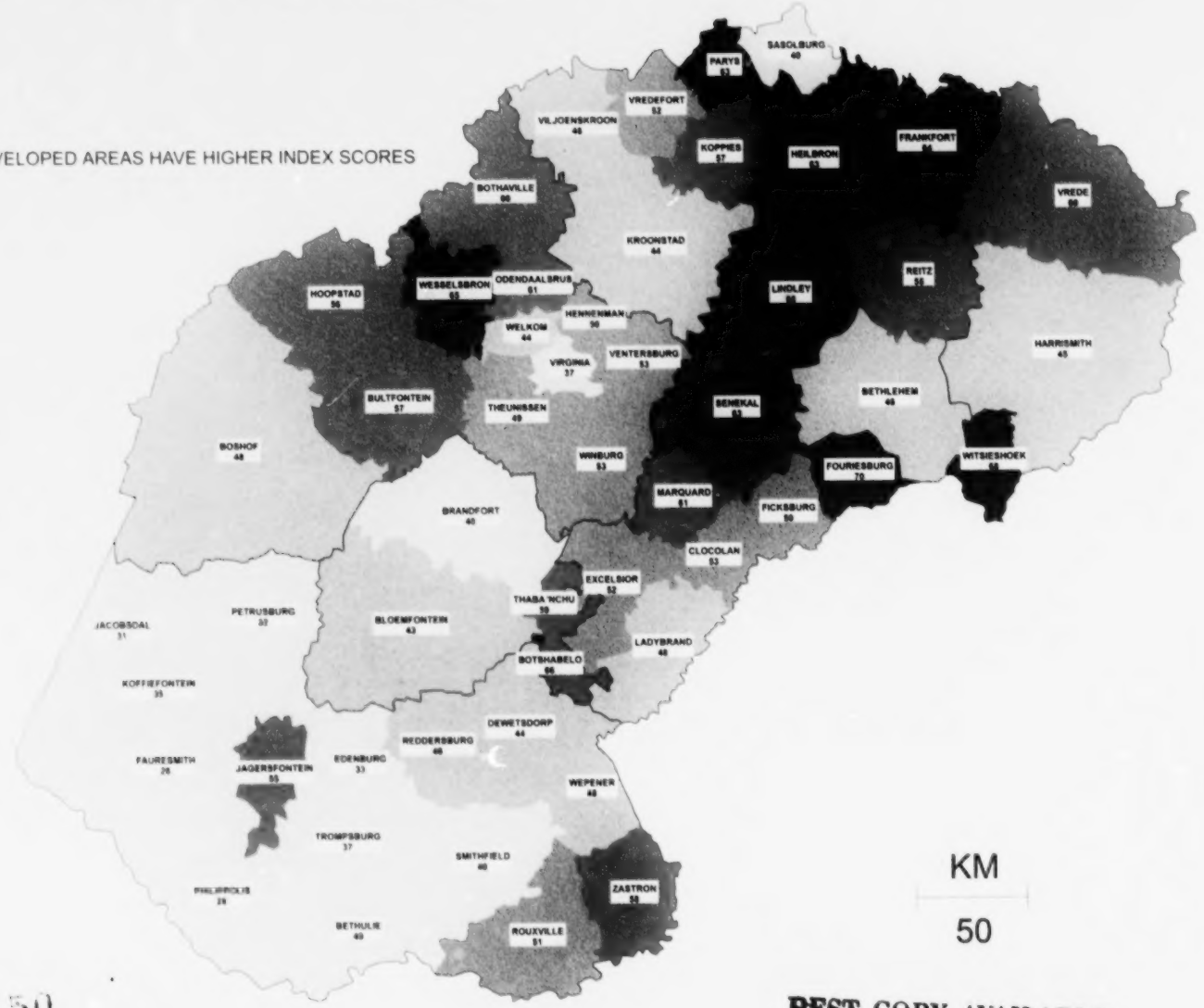
UNDERDEVELOPED AREAS HAVE HIGHER INDEX SCORES



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## Table 7: Index of Social Needs

| DISTRICT | SOCIAL INDEX |
|---|---|
| Fouriesburg | 70 |
| Witsieshoek | 68 |
| Lindley | 68 |
| Botshabelo | 66 |
| Wesselsbron | 65 |
| Frankfort | 64 |
| Parys | 63 |
| Heilbron | 63 |
| Senekal | 63 |
| Marquard | 61 |
| Odendaalsrus | 61 |
| Bothaville | 60 |
| Vrede | 60 |
| Thaba 'Nchu | 59 |
| Zastron | 58 |
| Koppies | 57 |
| Bultfontein | 57 |
| Hoopstad | 56 |
| Jagersfontein | 55 |
| Reitz | 55 |
| Ventersburg | 53 |
| Winburg | 53 |
| Clocolan | 53 |
| Excelsior | 52 |
| Vredefort | 52 |
| Rouxville | 51 |
| Hennenman | 50 |
| Ficksburg | 50 |
| Theunissen | 49 |
| Boshof | 48 |
| Wepener | 48 |
| Ladybrand | 48 |
| Viljoenskroon | 46 |
| Reddersburg | 46 |
| Bethlehem | 46 |
| Harrismith | 45 |
| Dewetsdorp | 44 |
| Welkom | 44 |
| Kroonstad | 44 |
| Bloemfontein | 43 |
| Smithfield | 40 |
| Sasolburg | 40 |
| Bethulie | 40 |
| Brandfort | 40 |
| Trompsburg | 37 |
| Virginia | 37 |
| Koffiefontein | 35 |
| Edenburg | 33 |
| Petrusburg | 32 |
| Jacobsdal | 31 |
| Philippolis | 28 |
| Fauresmith | 26 |

# 7

# PROVISION OF SERVICES IN THE FREE STATE

## 7.1 Education

This document was abridged from Education White Paper 2 - The Organisation, Governance and Funding of Schools 1996.

### Introduction

"South Africa's pattern of school organisation, governance and funding, which is a legacy of the apartheid system, must be transformed in accordance with democratic values and practice, and the requirements of the Constitution" (Education White Paper 2, 1996:1). The constitution establishes a democratic national, provincial and local government order. All governments and public schools are to observe fundamental rights and protect fundamental freedoms, many of which have direct implications for decisions made by school governors and managements. The constitution also obliges governments to negotiate with school governing bodies before changing their rights, powers and functions. They are also to fund all public schools on an equitable basis in order to achieve an acceptable level of education.

The White Paper "Education and Training in a Democratic South Africa: First Steps to Develop a New System", approved by cabinet in February 1995, described the process of investigation and consultation that would be followed by the Ministry of Education in order to bring a new pattern of school organisation into existence. For this purpose, a representative review committee was announced. "The Review Committee's brief was to recommend to the Minister of Education a proposed national framework of school organisation and ownership, and norms and standards of school governance and funding which, in the view of the committee, are likely to command the widest possible public support, accord with the requirements of the Constitution, improve the quality and effectiveness of schools, and be financially sustainable from public funds" (Education White Paper 2, 1996:1).

### Principles underlying a new framework

"The new structure of school organisation should create the conditions for developing a coherent, integrated, flexible national system which advances redress, the equitable use of public resources, an improvement in educational quality across the system, democratic governance, and school-based decision making within provincial guidelines. The new structure must be brought about through a well-managed process of negotiated change, based on the understanding that each public school should embody a partnership between the provincial education authorities and a local community. The new structure of the school system must address the inheritance of inequality and ensure an equitable, efficient, qualitatively sound and financially sustainable system for all its learners" (Education White Paper 2, 1996:5).

"The huge disparities among South African schools require a new structure of school organisation. A system of governance which will be workable as well as transformative. Both organisational structure and governance must be adequately uniform and coherent, but flexible enough to take into account the wide range of

school contexts, the significant contrasts in the material conditions of South African schools, the availability or absence of management skills, parents' experience or inexperience in school governance, and the physical distance of many parents from their children's schools. The South African population has a right to expect that a redesigned school system for a democratic South Africa will be manifestly new, more equitable, and empowering to all who have a direct stake in the success of schooling" (Education White Paper 2, 1996:6).

As a guide to negotiated change in the school system, the Ministry of Education therefore proposes that the new structure of school organisation, governance and funding must aim to

- "ensure both national coherence and the promotion of a sense of national common purpose in the public school system, while retaining flexibility and protecting diversity;
- enable a disciplined and purposeful school environment to be established, dedicated to a visible and measurable improvement in the quality of the learning process and learning outcomes throughout the system;
- enable representatives of the main stakeholders of the school to take responsibility for school governance, within a framework of regulation and support by the provincial education authorities;
- ensure that the involvement of government authorities in school governance is at the minimum required for legal accountability, and is based on participative management;
- enable school governing bodies to determine the mission and character or ethos of their schools, within the framework of Constitutional provisions affecting schools, and national and provincial school law;
- ensure that the decision-making authority assigned to school governing bodies is coupled with the allocation of an equitable share of public (budgetary) resources, and the right to raise additional resources, for them to manage;
- recognise that a governing body's right of decision making is not linked to the ability of its community to raise resources;
- ensure both equity and redress in funding from public (budgetary) resources, in order to achieve a fair distribution of public funds and the elimination of backlogs caused by past unequal treatment;
- improve efficiency in school education through the optimum use of public financial (budgetary) allocations, and publicly-funded staff resources" (Education White Paper 2, 1996:6).

Application of the principles underlying the ministry's approach to school organisation, governance and funding will be a very complex matter. This is because any solution to the inheritance of injustice in the schools will be difficult to apply and will take time to work through the system. "Therefore, it is all the more important that policy goals be clearly stated on the basis of defensible principles, so that they may properly guide the practical decisions that will be required in the course o drawing up legislation, in the process of negotiation with school governing bodies and teachers' organisations, and in the development of administrative arrangements to implement the new system" (Education White Paper 2, 1996:6).

## Organisation of schools

The policy of the Ministry of Education is that there shall be just two broad categories of schools in future: public schools and independent schools.

Public schools comprise community schools, farm schools, state schools, and state-aided schools (including church schools, Model C schools, mine schools, and others). Collectively, these comprise just over 98% of the country's primary and secondary schools, and almost 99% of school enrolments (Education White Paper 2, 1996).

Public schools will have the following features in common:

- "Each public school will represent a partnership between the provincial education department and the local community.
- Public schools will be funded from public resources, that is, from provincial education department budgets, and with few exceptions their property will be owned by the state.
- The admission policies of public schools will be determined by governing bodies in consultation with provincial education departments, in terms of national norms and provincial regulations, and will uphold constitutionally guaranteed rights and freedoms.
- The mission policy, and character or ethos of each public school will be determined within national and provincial frameworks by a governing body comprising elected representatives of the main stakeholders of the school.
- The salaries of teachers in each public school will be paid by the provincial education department according to a staff provisioning scale, and such teachers will be appointed in each public school by the provincial education department on the recommendation of and in consultation with the school's governing body" (Education White Paper 2, 1996:8).

"Independent schools comprise private or independent schools. Together, these account for not quite 2% of primary and secondary schools, and about 1,2% of enrolments. The Ministry of Education's policy is that schools presently known as private schools will henceforth be known as independent schools. The independent schools sector is very small, but it is important and appears to be growing. Independent schools are privately owned schools thatt appoint their own teachers. All independent schools should be required by law to register with the provincial education department and to comply with the conditions of registration laid down by the province. Such regulation or independent schools through a registration process under provincial government law is consistent with international practice" (Education White Paper 2, 1996:9).

## Governance in schools

"Governance policy for public schools is based on the core values of democracy. Governing bodies will have substantial decision-making powers, selected from a menu of powers according to their capacity. Teachers in public schools will be employed by the provincial education departments on the recommendation of and in consultation with governing bodies. The intention is that all public schools will be granted a legal personality in recognition of the responsibilities of their governing bodies. Governing bodies in all schools need to make suitable arrangements to meet

their responsibilities to learners with special education needs" (Education White Paper 2, 1996:9).

Schools in the independent sector have been established as educational trusts. They must comply with educational laws and regulations and register with provincial education departments. Conditions of registration should include approval of the school constitution, which should include provisions for governance. The Ministry will support provincial legislation or other measures to encourage private school owners, directors or trustees to introduce representative governing body or consultative arrangements in their own schools, where they have not already done so.

## Financing of schools

"The Review Committee proposed a new financial system for public schools based on a partnership between the government and communities, on the basis that nothing else is affordable under the present conditions. In terms of these proposals, provincial budgets would be restructured to secure fundamental constitutional requirements and policy objectives. School operating costs would be funded partly by subsidy, and partly by income-related school fees which would be obligatory for all parents who could afford them. Poor parents would not pay fees, and no child would be refused admission to school. The same system would apply in the compulsory and post-compulsory phases, with a reduced per capita subsidy in the post-compulsory phase. The system should be reviewed after five years" (Education White Paper 2, 1996:19).

Meanwhile, progress has been made on three important measures relating to school finance.

- "A single learner:educator ratio. A single ratio on which provincial staff provision scales can be based must underlie an equitable school financing system. On 29 September 1995, the Education Labour Relations Council (ELRC) signed an agreement on guideline learner:educator ratios of 40:1 in ordinary primary schools and 35:1 in ordinary secondary schools. These ratios do not stipulate exact class sizes, but provide parameters within which each provincial bargaining chamber will negotiate staff provisioning scales for its schools. This is a major step towards equity in the provision of educators to all schools. Separate agreements will be negotiated for other institutions including special schools and technical schools.
- An Education Management Information System (EMIS). A steering committee was established by the Department of Education to oversee the development of an EMIS. The committee comprises representatives of the national and provincial departments of education, the organised teaching profession, and a number of NGO and academic research units. By providing information to all ten departments of education, the new EMIS will support budgetary and personnel planning for 1996/97.
- A School Index of Needs. The index is required as a planning tool for departments of education. It will be compiled on the basis of a census of all 29 000 schools in the country, and will supplement the data gathered for the EMIS. The index will enable provincial departments, their regional and district offices, and school communities to make more informed and equitable decisions about financial allocations to schools for expenditure on redress and quality improvement" (Education White Paper 2, 1996:24).

### 7.1.1 Pupil : teacher ratios

The map shows that in general the pupil:teacher ratio in the Free State is not far from the 1991 national average of 41:1. Few districts will have to take drastic steps to adapt to new proposed ratios of 40:1, but districts in the western parts of the province seem to be heading for a shortage of teachers. This and the fact that African are often poorly qualified may mean disaster in future. The same applies to the industrialised area of Sasolburg. Compared with other parts of the country, the Free State seems reasonably well off as far as the number of teachers is concerned.

The highest African pupil:teacher ratios are found in the districts of Zastron, Phillipolis, Jagersfontein, Koffiefontein, Jacobsdal, Boshof, Bultfontein, Hoopstad, Wesselsbron, Odendaalsrus, Welkom, Virginia, Ventersburg, Parys, Sasolburg, Heilbron.

It is not clear whether these high ratios apply to the primary or secondary schools, or are due to the lack of classrooms, the unavailability of teachers or overcrowding by repeaters.

H.J. vd Linde and J.P. Strauss
University of the Free State

# MAP 8 : AFRICAN PUPILS PER TEACHER

Source : CSS, District Census 1991

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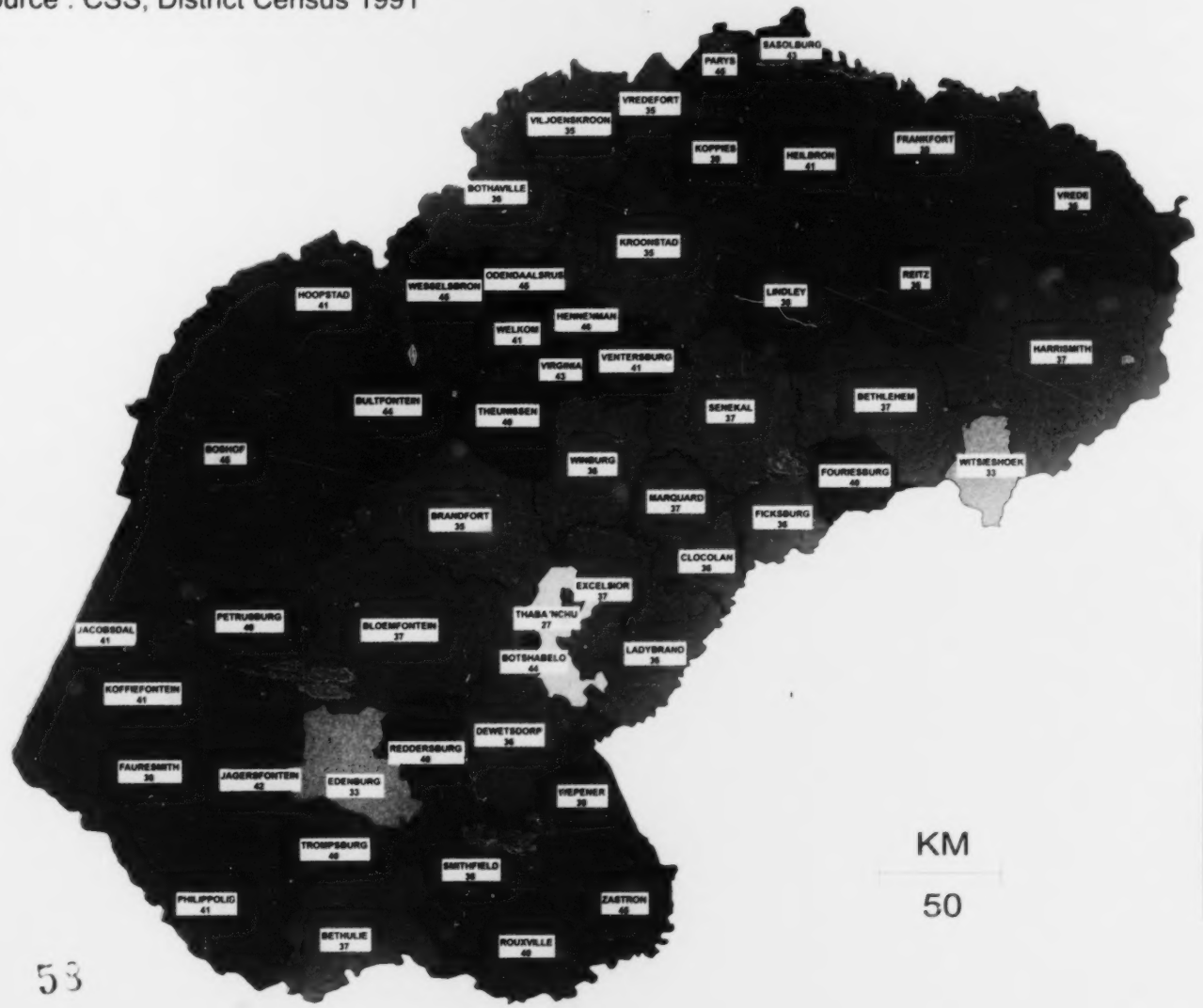


N

KM

50

Pupil:teacher ratio

| | | | | |
|---|---|---|---|---|
| | 27 | to | 31 |
| | 31 | to | 34 |
| | 34 | to | 38 |
| | 38 | to | 41 |
| | 41 | to | 45 |

53

53

## Table 8 African pupils per teacher

| DISTRICT | AFRICAN SCHOOL TEACHERS | AFRICAN PUPIL | AFRICAN PUPIL PER TEACHER |
|---|---|---|---|
| Bethlehem | 528 | 19 403 | 37 |
| Bethulie | 75 | 2 754 | 37 |
| Bloemfontein | 1 054 | 38 951 | 37 |
| Boshof | 164 | 7 363 | 45 |
| Bothaville | 428 | 15 434 | 36 |
| Botshabelo | 1 300 | 57 238 | 44 |
| Brandfort | 184 | 6 390 | 35 |
| Bultfontein | 206 | 9 091 | 44 |
| Clocolan | 154 | 5 488 | 36 |
| Dewetsdorp | 96 | 3 421 | 36 |
| Edenburg | 41 | 1 337 | 33 |
| Excelsior | 138 | 5 129 | 37 |
| Fauresmith | 26 | 976 | 38 |
| Ficksburg | 289 | 10 428 | 36 |
| Fouriesburg | 127 | 5 040 | 40 |
| Frankfort | 351 | 13 747 | 39 |
| Harrismith | 460 | 16 887 | 37 |
| Heilbron | 277 | 11 339 | 41 |
| Hennenman | 138 | 5 549 | 40 |
| Hoopstad | 145 | 5 933 | 41 |
| Jacobsdal | 21 | 866 | 41 |
| Jagersfontein | 39 | 1 633 | 42 |
| Koffiefontein | 35 | 1 451 | 41 |
| Koppies | 143 | 5 618 | 39 |
| Kroonstad | 747 | 26 033 | 35 |
| Ladybrand | 201 | 7 138 | 36 |
| Lindley | 342 | 12 932 | 38 |
| Marquard | 131 | 4 888 | 37 |
| Odendaalsrus | 358 | 16 132 | 45 |
| Parys | 249 | 11 173 | 45 |
| Petrusburg | 58 | 2 348 | 40 |
| Philippolis | 21 | 853 | 41 |
| Reddersburg | 39 | 1 567 | 40 |
| Reitz | 210 | 7 968 | 38 |
| Rouxville | 54 | 2 174 | 40 |
| Sasolburg | 353 | 15 296 | 43 |
| Senekal | 336 | 12 537 | 37 |
| Smithfield | 51 | 1 917 | 38 |
| Thaba 'Nchu | 811 | 21 892 | 27 |
| Theunissen | 175 | 6 936 | 40 |
| Trompsburg | 25 | 1 003 | 40 |
| Ventersburg | 89 | 3 633 | 41 |
| Viljoenskroon | 331 | 11 694 | 35 |
| Virginia | 182 | 7 796 | 43 |
| Vrede | 316 | 12 064 | 38 |
| Vredefort | 118 | 4 088 | 35 |
| Welkom | 616 | 25 132 | 41 |
| Wepener | 85 | 3 292 | 39 |
| Wesselsbron | 196 | 8 743 | 45 |
| Winburg | 141 | 5 110 | 36 |
| Witsieshoek | 3 387 | 110 937 | 33 |
| Zastron | 92 | 4 165 | 45 |

## 7.1.2 Adult literacy

The map shows that the higher concentrations of qualified people in the 15 to 64 year age group are found in the more commercially active areas like Bloemfontein, Welkom, Kroonstad, Sasolburg/Parys, Bethlehem and Witsieshoek (QwaQwa). It is surprising that Koffiefontein, Trompsburg and Bethulie also fall into this group.

One reason for this may be the concentration of more accessible schools in these areas, whereas the farming areas have small farm schools which in many cases are not easily accessible because of long travel distances and inadequate transport facilities.

The following districts have the lowest functional literacy as well as the lowest percentage of adults with a Standard 6 or higher qualification: Jacobsdal, Boshof, Hoopstad, Vrede, Fouriesburg, Marquard, Dewetsdorp and Rouxville.

Possible reasons for this situation can be that, although farm schools provide education up to Standard 5, it is difficult for pupils from the farms to proceed to secondary education since it is available only in towns. The districts, especially in the western part of the Free State, are vast and transport to school as well as boarding facilities in towns are limited.

Functional literacy is highest in the more industrialised districts like Bloemfontein, Welkom and Sasolburg because in most cases literacy is a prerequisite for employment.

H.J. vd Linde and J.P. Strauss
University of the Free State

# MAP 9 : PERCENTAGE ADULTS BETWEEN 15 AND 64 YEARS WITH STANDARD 6 OR HIGHER EDUCATION

Source : CSS, District Census 1991

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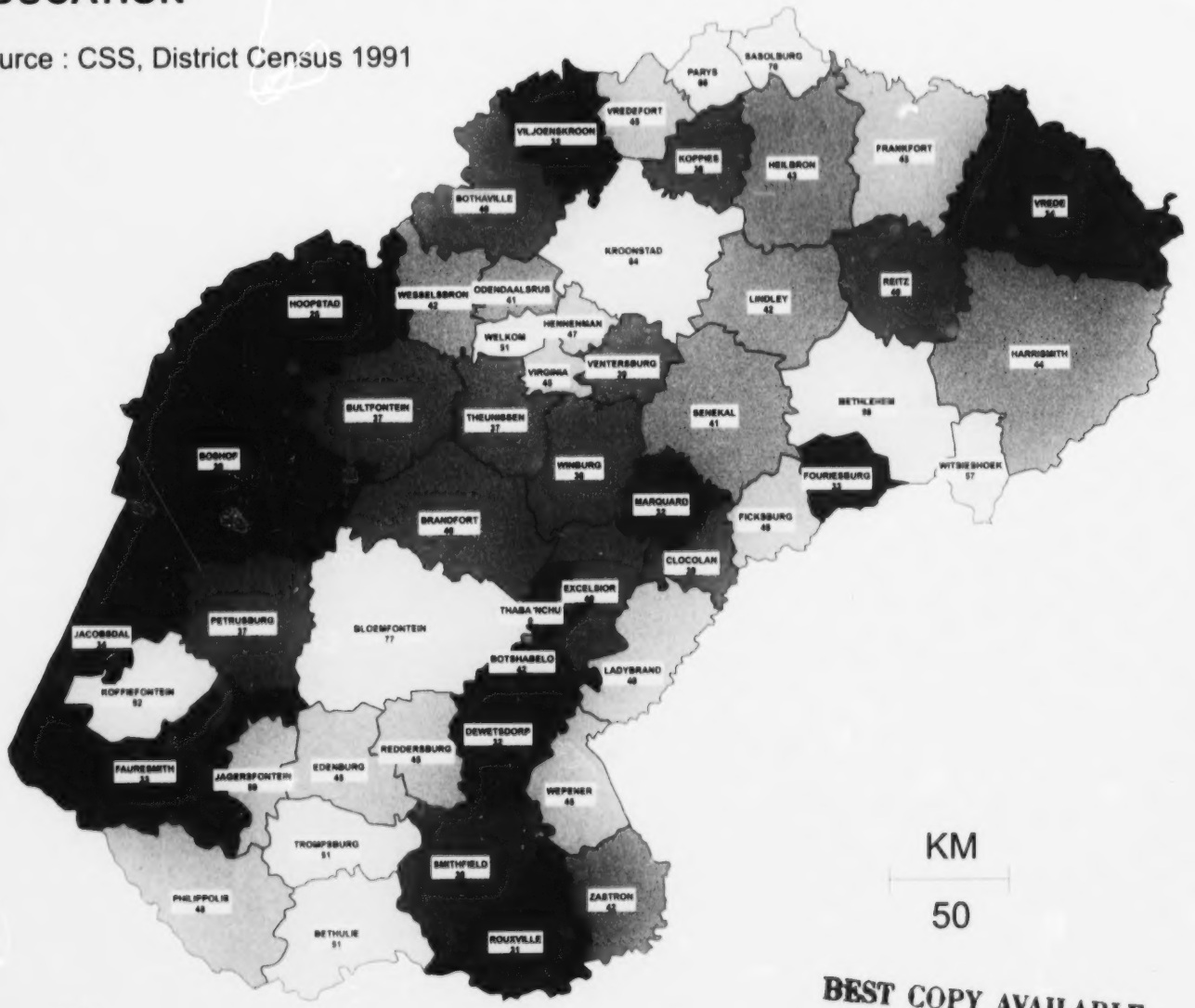


N

KM

50

% adults

| | | | |
|---|---|---|---|
| 0 | to | 34 |
| 34 | to | 40 |
| 40 | to | 44 |
| 44 | to | 50 |
| 50 | to | 77 |

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## Table 9 Percentage adults between 15 and 64 years with Standard 6 or higher education

| DISTRICT | TOTAL 15 TO 64 YEAR OLDS | SECONDARY EDUCATION | TERTIARY EDUCATION | % 15 TO 64 WITH STD 6 OR HIGHER |
|---|---|---|---|---|
| Bethlehem | 47 689 | 24 611 | 2 891 | 58 |
| Bethulie | 5 211 | 2 408 | 243 | 51 |
| Bloemfontein | 210 132 | 140 275 | 22 030 | 77 |
| Boshof | 17 379 | 4 714 | 447 | 30 |
| Bothaville | 30 390 | 11 238 | 995 | 40 |
| Botshabelo | 104 989 | 42 374 | 1 350 | 42 |
| Brandfort | 13 164 | 4 801 | 492 | 40 |
| Bultfontein | 15 685 | 5 370 | 445 | 37 |
| Clocolan | 10 015 | 3 547 | 352 | 39 |
| Dewetsdorp | 7 103 | 1 969 | 277 | 32 |
| Edenburg | 3 750 | 1 519 | 154 | 45 |
| Excelsior | 9 603 | 3 507 | 288 | 40 |
| Fauresmith | 5 342 | 1 526 | 233 | 33 |
| Ficksburg | 20 698 | 9 082 | 809 | 48 |
| Fouriesburg | 8 526 | 2 527 | 275 | 33 |
| Frankfort | 24 016 | 9 960 | 756 | 45 |
| Harrismith | 35 861 | 13 866 | 1 955 | 44 |
| Heilbron | 22 167 | 8 567 | 971 | 43 |
| Hennenman | 17 363 | 7 768 | 469 | 47 |
| Hoopstad | 14 592 | 3 313 | 377 | 25 |
| Jacobsdal | 5 795 | 1 725 | 272 | 34 |
| Jagersfontein | 3 729 | 1 737 | 144 | 50 |
| Koffiefontein | 6 438 | 3 028 | 333 | 52 |
| Koppies | 10 761 | 3 798 | 311 | 38 |
| Kroonstad | 68 761 | 40 165 | 3 773 | 64 |
| Ladybrand | 16 573 | 7 209 | 766 | 48 |
| Lindley | 19 070 | 7 373 | 634 | 42 |
| Marquard | 8 737 | 2 566 | 261 | 32 |
| Odendaalsrus | 70 699 | 27 846 | 1 206 | 41 |
| Parys | 29 697 | 18 023 | 1 670 | 66 |
| Petrusburg | 6 045 | 1 966 | 256 | 37 |
| Philippolis | 4 085 | 1 734 | 226 | 48 |
| Reddersburg | 3 070 | 1 245 | 134 | 45 |
| Reitz | 16 413 | 5 919 | 587 | 40 |
| Rouxville | 7 328 | 2 030 | 237 | 31 |
| Sasolburg | 63 015 | 39 343 | 4 563 | 70 |
| Senekal | 21 458 | 8 147 | 755 | 41 |
| Smithfield | 4 138 | 1 406 | 182 | 38 |
| Thaba 'Nchu | 40 789 | no data | no data | no data |
| Theunissen | 28 854 | 10 337 | 317 | 37 |
| Trompsburg | 2 870 | 1 305 | 146 | 51 |
| Ventersburg | 8 004 | 2 830 | 258 | 39 |
| Viljoenskroon | 42 463 | 13 037 | 623 | 32 |
| Virginia | 67 143 | 28 629 | 1 493 | 45 |
| Vrede | 19 620 | 6 120 | 599 | 34 |
| Vredefort | 7 448 | 3 160 | 209 | 45 |
| Welkom | 199 223 | 94 143 | 6 848 | 51 |
| Wepener | 7 306 | 2 993 | 267 | 45 |
| Wesselsbron | 14 848 | 5 830 | 360 | 42 |
| Winburg | 9 578 | 3 303 | 321 | 38 |
| Witsieshoek | 183 400 | 98 543 | 5 115 | 57 |
| Zastron | 7 646 | 2 925 | 289 | 42 |

## 7.1.3 Pre-school education

### Introduction

Early Childhood Development (ECD) programmes provide an important nucleus for broader community development and often mobilise a large group of people around children's issues. Its significance in local development is that most programmes are community initiated and the service is often experienced and expressed as a need, especially by working mothers. There is also a growing recognition of the educational value of ECD provision as parents, teachers and principals become aware of the importance of the child's developmental years in relation to schooling success and general life skills, especially in the face of the unacceptably high Grade 1 failure rates.

### Distribution

The data provided do not differentiate between population groups with regard to provision and historically the provision of these facilities has been better in white communities. Nor do the data on population size and provision seem to be realistic and therefore comments on distribution patterns cannot be based solely on these data. Historically state support has not been equitable with regard to population size and groups, and this has had an impact on provision patterns.

### Accessibility

Access to ECD services varies significantly between different residential situations such as farms, small towns, major centres, established informal settlements, new squatter settlements and established residential areas. There are variances within a particular district and differences may be greater within a district than between districts. Furthermore, recent developments have led to increased urbanisation and increase in informal settlements in urban areas. However, the newer squatter areas in larger centres and the informal settlements in smaller towns remain neglected and are among the most disadvantaged with regard to educational facilities.

### Provision

In spite of clear (though often controversial) ECD policy, provision in the former homelands has not been widespread and is deteriorating. Farming areas in particular need attention. The location of non-governmental ECD organisations affects the distribution and quality of provision and those areas not yet reached by these services, are noticeably disadvantaged. For example, the statistics for the south-western Free State are relatively good, since services are available for town children, but provision for farms in this area is virtually non-existent. Peripheral towns such as Vrede and Hertzogville are not easily reached and are often overlooked.

### Policy

Another factor influencing provision trends are the prevailing development policies that embody characteristics of political correctness and fashion trends, for example the focus on informal settlements in large towns or on historically black communities in preference to brown communities. A broad range of social, economic and political factors also impact on young children and their needs. For instance, in areas like Witsieshoek many families are affected by the absence of fathers who work as

migrant labourers; and the mining communities of the Goldfields have particular social dynamics. These factors indicate the need for a certain quality and type of ECD provision.

### ECD issues relevant to meeting future needs

The following issues which currently affect ECD service provision will also need continued attention in the future:

- Provision should address the reality of children in a variety of settings and should include a range of appropriate options that reflect the people's needs.
- Provision should be achievable, of an acceptable quality and sustainable by communities.
- Provision should not target the children in isolation from their broader community (e.g. the family), but aim at maximising its impact throughout the community.
- Provision should reflect an understanding of the total needs and development potential of the child.
- The need to expand and develop ECD services and ensure their sustainability is dependent on material resources.
- A coherent policy for the whole province that is understood by everyone is sorely needed.
- Meaningful co-operation within and between the various fields of operation, for example formal and non-formal, as well as education, welfare and health is crucial.
- Strategies to address questions of scale, particularly regarding finances and support are needed.
- A commitment from government and effective mechanisms for co-operation between government departments and civil society are urgently needed. An effort by the non-government sector to bring players together to discuss policy development failed, owing to the low priority accorded ECD by the provincial education department.

### Comments on data provided

The data used were obtained by L. Biersteker during the NEF study from the provincial welfare department and a few of the NGOs operating in the field and captures only those areas and programmes served by them. Furthermore the limited time allowed for data collection may have negative implications for the reliability of the data. A major problem is that although the data reflect the extent of provision, they do not give any indication of quality or type. Also reliable data regarding the number of children are not available – a situation that will hopefully be addressed by the next national census.

The following aspects should be taken into account when collecting data:

- A system that can be updated on an ongoing basis should be used.
- All areas or districts should be included to obtain better results.
- Enough time should be allowed for proper data collection.
- Local resources and knowledge should be used.
- Trust, community involvement and ownership should be considered in obtaining more reliable information.

- Language issues must be taken into account.
- A variety of data sources, for example from other sectors, should be used.

Some important indicators for directing the provision Early Childhood Development programmes include the following:

- Unemployment
- Single parent families
- Extended family care options (generally more prevalent in rural than in urban areas)
- Quality of the service
- The type of community, for example rural, urban, farm, etc.
- Location of the service with regard to access (for example neighbourhood-based services)
- Private or publicly owned and managed programmes

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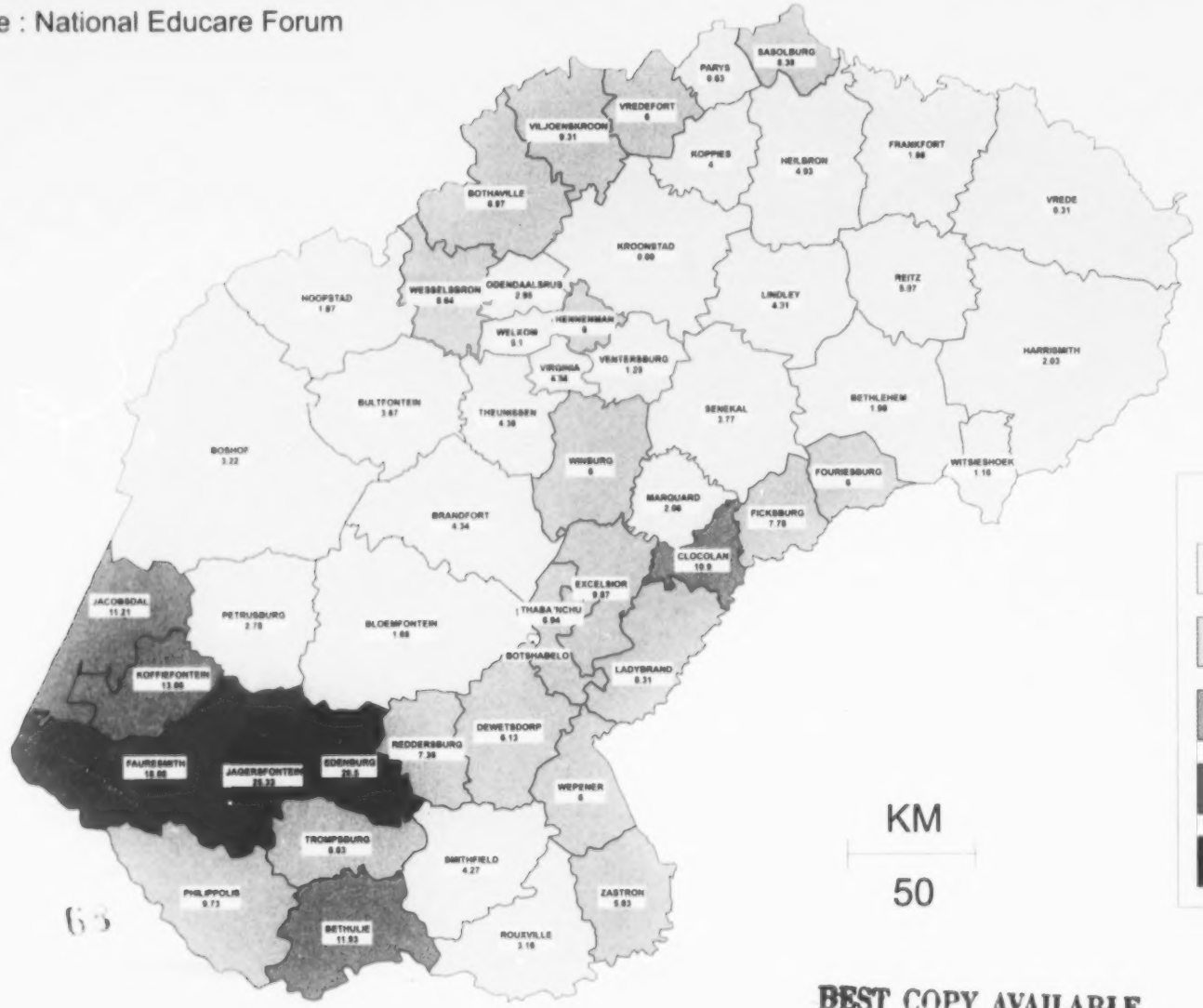
# MAP 10 : PERCENTAGE CHILDREN YOUNGER THAN 6 YEARS IN EDUCARE OR PRE-PRIMARY SCHOOL

Source : National Educare Forum

HSRC
RGN
GIS UNIT

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## Table 10 Percentage children younger than 6 years in educare or pre-primary school

| DISTRICT | EDUCARE CENTRES | CHILDREN (0-5) AT CENTRES | TOTAL AGED 0 - 5 | % TOTAL CHILDREN AT CENTRES |
|---|---|---|---|---|
| Bethlehem | 5 | 246 | 12 400 | 1,98 |
| Bethulie | 3 | 167 | 1 400 | 11,93 |
| Bloemfontein | 12 | 492 | 29 600 | 1,66 |
| Boshof | 4 | 174 | 5 400 | 3,22 |
| Bothaville | 25 | 662 | 9 500 | 6,97 |
| Brandfort | 2 | 165 | 3 800 | 4,34 |
| Bultfontein | 1 | 187 | 5 100 | 3,67 |
| Clocolan | 14 | 327 | 3 000 | 10,90 |
| Dewetsdorp | 3 | 147 | 2 400 | 6,13 |
| Edenburg | 4 | 246 | 1 200 | 20,50 |
| Excelsior | 11 | 296 | 3 000 | 9,87 |
| Fauresmith | 4 | 235 | 1 300 | 18,08 |
| Ficksburg | 25 | 467 | 6 000 | 7,78 |
| Fouriesburg | | regional average | 3 300 | 6,00 |
| Frankfort | 2 | 147 | 7 800 | 1,88 |
| Harrismith | 4 | 215 | 10 600 | 2,03 |
| Heilbron | 6 | 350 | 7 100 | 4,93 |
| Hennenman | | regional average | 2 900 | 6,00 |
| Hoopstad | 1 | 103 | 5 500 | 1,87 |
| Jacobsdal | 3 | 157 | 1 400 | 11,21 |
| Jagersfontein | 3 | 228 | 900 | 25,33 |
| Koffiefontein | 3 | 222 | 1 700 | 13,06 |
| Koppies | 2 | 128 | 3 200 | 4,00 |
| Kroonstad | 2 | 105 | 15 300 | 0,69 |
| Ladybrand | 13 | 432 | 5 200 | 8,31 |
| Lindley | 6 | 306 | 7 100 | 4,31 |
| Marquard | 1 | 70 | 3 400 | 2,06 |
| Odendaalsrus | 4 | 313 | 10 600 | 2,95 |
| Parys | 1 | 40 | 6 300 | 0,63 |
| Petrusburg | 1 | 50 | 1 800 | 2,78 |
| Phillipolis | 2 | 107 | 1 100 | 9,73 |
| Reddersburg | 2 | 81 | 1 100 | 7,36 |
| Reitz | 6 | 294 | 5 800 | 5,07 |
| Rouxville | 2 | 60 | 1 900 | 3,16 |
| Sasolburg | 17 | 804 | 9 600 | 8,38 |
| Senekal | 4 | 290 | 7 700 | 3,77 |
| Smithfield | 1 | 64 | 1 500 | 4,27 |
| Thaba 'Nchu | 20 | 902 | 13 000 | 6,94 |
| Theunissen | 1 | 162 | 3 700 | 4,38 |
| Trompsburg | 1 | 69 | 800 | 8,63 |
| Ventersburg | 1 | 30 | 2 400 | 1,25 |
| Viljoenskroon | 24 | 605 | 6 500 | 9,31 |
| Virginia | 2 | 251 | 5 500 | 4,56 |
| Vrede | 1 | 20 | 6 500 | 0,31 |
| Vredefort | 2 | 138 | 2 300 | 6,00 |
| Welkom | 19 | 1020 | 20 000 | 5,10 |
| Wepener | 3 | 120 | 2 000 | 6,00 |
| Wesselsbron | 13 | 380 | 4 400 | 8,64 |
| Winburg | | regional average | 3 100 | 6,00 |
| Witsieshoek | 8 | 684 | 59 000 | 1,16 |
| Zastron | 2 | 134 | 2 300 | 5,83 |

## 7.2 Health

### Introduction

The sections dealing with problems and challenges, restructuring, policy framework, principles, and district health system are abridged from the Policy Document "Restructuring the National Health System for Universal Primary Health Care, 1996".

"Health care delivery in South Africa faces a number of acute problems and challenges, many of which are related to the utilisation and distribution of financial and other resources. Approximately R30 billion was spent on health care in South Africa in 1992/93. This is equivalent to 8,5 % of gross domestic product (GDP), or one-twelfth of the economy. South Africa is thus devoting substantially more resources to the health sector than most developing countries, yet has poor health status relative to these countries" (Restructuring the National Health System for Universal Primary Health Care, 1996:1).

### Problems and challenges confronting the public health sector

One of the most pressing problems facing public health services is the heavy concentration of resources within the hospital sector, and consequent underresourcing of primary health care services. "Approximately 76% of total public sector health care expenditure was attributable to acute hospitals in 1992/93, with academic and other tertiary hospitals alone accounting for 44%. In contrast, 11% was spent on non-hospital primary care services. While certain hospitals provide quite substantial primary care services (e.g. deliveries, and ambulatory care at community hospital outpatient departments), it is clear that a redistribution of resources between levels of care is required if the government is to significantly improve access to community-based primary care services for those who currently do not have such access" (Restructuring the National Health System for Universal Primary Health Care, 1996:2).

The effectiveness of public sector health services is also undermined by the historical geographic maldistribution of resources that are the legacy of the apartheid health care system. An explicit process of resource reallocation between the nine provinces has been implemented with effect from the 1995/96 financial year. "The stated goal is to achieve per capita equity in provincial health care allocations, with an allowance for provinces with academic complexes, within five years. While attention is usually focused on the distribution of resources between provinces, recent data have highlighted significant intraprovincial disparities in public sector resource allocation. These indicate that the public sector in the richest magisterial districts employs 4,5 times more general doctors, 2,4 times more registered nurses, and 6,1 times more health inspectors than in the poorest districts, and that average public expenditure per person on health services in the richest districts is 3,6 times more than in the poorest districts" (Restructuring the National Health System for Universal Primary Health Care, 1996:3).

The inequitable and inefficient distribution of public sector health care resources has contributed to inadequate public health sector performance over the last several decades. This is manifest in extremely poor health indicators, including high rates of avoidable morbidity, disability and mortality among the poor and disadvantaged communities, particularly in rural or urban underserviced areas. These problems will

be significantly addressed through improvements in quality and accessibility of the public primary health care delivery system.

"In summary, the public sector faces the challenge of attempting to improve access to basic primary care services for those who currently do not have access to such care, while at the same time trying to redress historical inequities in the distribution of health care resources between and within provinces. This must be achieved within the constraints of a limited budget which is currently derived mainly from general tax revenues" (Restructuring the National Health System for Universal Primary Health Care, 1996:3).

### Problems and challenges confronting the private health sector

"Over the past decade, expenditure in the private sector, in particular that by medical schemes, has increased more rapidly than the rate of inflation, with expenditure on medicines and private hospitals increasing rapidly during this period. The rise in expenditure on benefits is due to increases in both unit costs and utilisation levels. Several factors have driven these increases, including the fee-for-service reimbursement of providers, the fact that some doctors have a stake in the financial performance of hospitals through share ownership, as well as the fact that many health service providers (including hospitals and medical practitioners) benefit financially from selling medicines. Cost increases have also been driven by increases in the proportion of scheme members who are elderly. As expected, the level of contributions to medical schemes has also risen rapidly, since schemes must finance the benefit payments out of contributions" (Restructuring the National Health System for Universal Primary Health Care, 1996:3).

"Recent changes to the legislation governing medical schemes, (the Medical Schemes Amendment Act of 1993) have improved the capacity of schemes to manage their costs to some extent. However, previous changes to the legislation (specifically, the 1989 amendments to the Act), have created a situation in which the cross-subsidisation of elderly members by younger, healthier members is undermined, in that medical schemes are now permitted to charge high risk members higher contributions, based on their previous medical claims or on pre-existing conditions. Certain schemes are thus becoming increasingly unaffordable for the elderly and chronically ill who will rely more heavily on public sector health services" (Restructuring the National Health System for Universal Primary Health Care, 1996:4).

"The rapid cost spiral and fragmentation of risk pools within medical schemes is of concern to a number of health sector stakeholders. Medical scheme membership is becoming increasingly unaffordable for many South Africans, and especially those with low incomes, the elderly and those with chronic illnesses. In the absence of a substantial cost-containment effort, scheme membership may begin to decline significantly, and expansion of the medical scheme market to low income earners is unlikely to occur. This will have negative consequences for the public health sector, through increasing numbers of medical scheme members becoming dependent on public sector services for their health care. It is recognised that recent trends towards the emergence of managed care arrangements may go some way towards alleviating cost pressures in the private health insurance market. However, additional regulatory measures are considered essential in order to address the full range of inefficiencies

now pertaining in that market" (Restructuring the National Health System for Universal Primary Health Care 1996:4).

### Need for restructuring of the national health system

The serious problems in both the public and private sectors, and in the interface between them, will become increasingly serious as the burden on the health services increases over time due to the rapidly expanding HIV/AIDS epidemic, and to the ageing of the population and other epidemiological shifts inherent in the epidemiological transition being experienced by the country.

Addressing these problems effectively will require a significant level of restructuring of both sectors and of their interactions. Some elements of this restructuring can be undertaken in the short term, while other elements will take at least five to ten years to implement. Particular priorities in this restructuring process include the following:

- Efforts to restrict the growth of health sector expenditure in South Africa, by focusing on the more efficient and effective use of existing resources
- Improving the access of South Africans to health services, as well as the quality of services, particularly at the primary care level and in geographic areas that are currently underresourced
- Promoting the redistribution of resources between levels of care within the public sector
- Achieving a redistribution of resources currently used only in the private sector to make them accessible to a broader section of the population
- Promoting of cost-containment efforts within the private sector (Restructuring the National Health System for Universal Primary Health Care, 1996).

### Policy framework for the national health system

This policy document contains a set of policies that will involve a comprehensive restructuring of health care in South Africa, aimed at the development of a comprehensive, efficient and equitable national health system. More specifically the policies aim to achieve

- substantial, visible and sustainable improvements to the accessibility, efficiency and effectiveness of publicly funded primary health care (PHC) service;
- improvements in the funding, efficiency and governance of the public hospital system, and
- improvements in the equity and efficiency of the private health sector, and in the interaction between the public and private health care systems. (Restructuring the National Health System for Universal Primary Health Care, 1996).

### Principles of the PHC delivery system

The national health system should ensure

- universal access (the ease with which health services may be accessed geographically, financially, and socially).
- The national health system should build on and strengthen the existing public sector PHC and hospital system.

- The national health system should be congruent with, and should strengthen the emerging district-based health care system.
- The national health system should be based on a comprehensive primary health care approach, and should use population-based planning and delivery mechanisms.
- The PHC delivery system should be fully integrated with, and consistent with, other levels of the national health system.
- The national health system should optimise the public-private mix in health care provision, and should ensure the achievement of redistribution of resources between the private and public sectors.
- The national health system should preserve the choice of individuals to use private providers and to insure themselves for doing so.
- The national health system should emphasise the needs and rights of users of the system, and should empower users and their communities to participate in governance of the health care system.
- The national health system should be outcome driven, and should place substantial emphasis on quality of patient care, on health outcomes, and on the "caring" aspects of health care services.
- The organisation and functioning of the national health system should be based on the principle of decentralised management. It must aim to create the maximum possible management autonomy at health facility level within the framework of national public service guidelines (Restructuring the National Health System for Universal Primary Health Care, 1996).

## The district health system

"The South African Government of National Unity, through its adoption of the Reconstruction and Development Programme (RDP) in 1994, committed itself to the development of a District Health System based on the Primary Health Care approach as enunciated at Alma Ata in 1978. This approach is the philosophy behind which many health systems around the world have been reformed, and out of which has developed the concept of the District Health System. District-based health services are now applied successfully in many countries, and have been adapted to a wide variety of situations, from developing countries on our own continent, to more sophisticated systems such as that of Canada" (Restructuring the National Health System for Universal Primary Health Care:1996).

A national health system based on this approach is as concerned with keeping people healthy, as it is with caring for them when they become unwell. These concepts of "caring" and "wellness" are promoted most effectively and efficiently by creating small management units of the health system, adapted to cater for local needs. These units provide the framework for our district-based health system, so that a district health authority can take responsibility for the health of the population in its area (Restructuring the National Health System for Universal Primary Health Care, 1996:).

Primary health care (PHC) services are at present provided in a fragmented and inefficient manner. Co-ordination between the public and private sectors is minimal, and within the public sector there has been a multitude of different (and overlapping) authorities responsible for health services. Salaries, and terms and conditions of service vary greatly between different local authorities, and between local authorities and the provincial and national administrations.

Restructuring district level health services will be a complex process, but failure to do so will perpetuate inefficiency and inequity. An integrated health system is built on the provision of health and health care services at the community level. Central to the PHC approach is full community participation in the planning, provision, control and monitoring of services.

Comprehensive PHC activities encompass all that is required to make a difference to people's lives: to make them healthy, and to advocate for the conditions that will keep them healthy. This is the "wellness" approach to health systems. It recognises that our health is determined by factors that go beyond the traditional definition of health and health care. There are social and other determinants such as housing, water, sanitation, education, employment, income, the environment, and individual lifestyle that all play major roles in determining our health. This means that a health service based on wellness should, *inter alia,*

- be structured so that appropriate emphasis is placed on prevention, health education and promotion, early intervention, and rehabilitation;
- be responsive to community needs by placing control and management responsibilities at a local level;
- eliminate inequities and establish intersectoral development links;
- integrate institutional, community-based and preventive programmes both within the health sector and with other sectors impacting on health;
- reduce waste and eliminate duplication at all levels (Restructuring the National Health System for Universal Primary Health Care, 1996).

The system must be structured so that no one in need is prevented from accessing any of the levels of care that they may require, rapidly and efficiently, and so that all will receive the highest quality of care at all levels.

"The district level is the level at which co-ordination of all district health services takes place, and is the unit of management of the health system that is best able to drive it. The district must be large enough to be economically efficient, but small enough to ensure effective management which is accountable to local communities and is responsive to local needs through the participation of communities and of staff in the planning and management of services" (Restructuring the National Health System for Universal Primary Health Care, 1996).

### 7.2.1 Average population per hospital bed

The financial and logistical problems facing health care services in providing equal access to acceptable standards of health care must be urgently addressed. This need not always cost more money. Often reorganisation of services as well as partnerships with stakeholders such as NGOs, industrial health services, organised agriculture, agricultural unions and organisations such as the Rural Foundation can contribute to equal access. Community health workers and traditional birth attendants can be trained to form partnerships with health professionals. Owing to the fact that most services are available during traditional office hours, employer collaboration also affects accessibility.

Accessibility has more facets than just distance and cost, which can be measured. The acceptability of the service and the personnel are major contributors to access and the attitude of the personnel is equally important.

The availability of transport and means of communication also affect accessibility as do the times when clinics are open and the ready availability of all essential services at times that suit the target community. Long waiting times can exclude busy or employed people from receiving essential services like family planning and tuberculosis treatment and management.

Many of these problems can be addressed by a thorough investigation of the situation in each clinic or area. Furthermore, an analysis of underlying causes and the implementation of effective solutions is recommended.

The following actions are suggested:

- Discussions with community representatives to find solutions to some of the problems
- Recruitment of personnel from the local community to avoid lengthy and time consuming transporting of personnel
- Implementation of an appointment system
- Alteration of the shift systems to suit both the community and the personnel

Previously administrations were centred in Bloemfontein, Mmabatho and Phutaditjhaba. Now there is one provincial administration and six regional administrations located as follows:

Region A: Bloemfontein
Region B: Koffiefontein
Region C: Welkom
Region D: Kroonstad
Region E: Phuthaditjhaba/Harrismith
Region F: Bethlehem

- There is a maldistribution of specialised personnel of every category predominantly in favour of Region A and to a much lesser extent of Regions C, D and F and a total absence of certain key personnel for Regions B and E. It will therefore be necessary for the academic health centre in Bloemfontein to reorganise its service to build capacity in the peripheral areas. Student or registrar allocation as well as consultation services can be extended to include the distant

regions. Effective referral services as well as referral protocols need to be established after capacity has been strengthened in the other regions.

- Specialist obstetric services are a case in point with 3,51 obstetric and gynaecological specialist equivalent work units (EWUs) per 100 000 of the population located in Bloemfontein (Region A) and only 0,11 and 0,03 EWUs available in Regions D and F respectively. Uniform standards of, for example, perinatal care are required to address the basic health needs of all communities. This has implications for the standards of care available.

- Rationalisation of health services within the district health system currently being created will go some way towards the more efficient use of scarce (human and material) resources. Certain management and support or line function personnel can be shared.

- Redistribution of personnel is being addressed to some extent by the lateral placement of existing personnel in the new staff establishment. More redistribution among district health authorities (DHAs) will be necessary to enable adequate staffing norms in underserviced areas.

### Population per examination unit in the Free State

The population per examination unit could be one indication of accessibility of health services. The regions with the largest populations have the greatest population per examination unit ratio. Yet Region C, with the largest population (770 291), has the second largest population per examination unit ratio. Region C has exactly the same nurse per population ratio as the two regions with the second (A = 589 785) and third (E = 513 888) largest population ratios. Since Region A is the seat of the only academic health service in the province, one would have expected the highest nurse per examination unit ratio to have been there.

Region B has long and a small, widely dispersed population, therefore proportionately greater numbers of nurses and more examination units may be needed to service this region adequately.

- In 1995 the Free State had 37 public hospitals. This meant an average ratio of 0,13 hospitals per 10 000 of the population for the entire province. The hospitals were, however, most unevenly spread over the six health and welfare regions.
- Regarding the health and welfare regions, the number of public hospitals were distributed in decreasing order as follows: Region C had 8, A had 7, D and F had 6 each, B and E had 5 each.
- In terms of the population catered for, Region B had by far the most favourable provision ratio, namely 5,41 per 10 000, followed by Regions C and F at far lower ratios of 1,86 and 1,25 per 10 000 respectively. The least favourable level of provision in terms of population served occurred in Regions D (0,90/10 000), Region E (0,75/10 000) and particularly in Region A (0,58/10 000), that is the Bloemfontein-Botshabelo area. It must however be noted that distance from facilities and the geographical area of the region affects the provision of health care facilities.
- As far as type of hospitals is concerned, the Free State's 37 hospitals consist of one academic health centre (Universitas, National and Orange hospitals situated in Region A, Bloemfontein), two tertiary hospitals (one each in Region A [Pelonomi at Bloemfontein] and Region C [Welkom]), four secondary hospitals of which two are in Region F (both in Bethlehem) and one each in Regions D

(Kroonstad) and E (Phuthaditjhaba). A total of 25 community hospitals are found in the province: six in Region C, five each in Regions B and D, and four, three and two in Regions F, E and A respectively.

- Special hospitals in the Free State comprise two types: firstly, hospitals for chronic diseases of which there are four: two in Region A (both in Thaba 'Nchu) and one each in Regions C (Allanridge) and E (Phuthaditjhaba). Only one hospital for mental health exists, namely in Region A (Oranje Hospital in Bloemfontein).
- Of the 7 645 beds in the Free State in 1995, the largest number by far (3 907) were found in the residual category of other acute care beds, representing more than half (51%) of all public hospital beds. Next in line were paediatric beds, comprising 924 beds or 12% of the total number; then followed other chronic beds (665 or 9%), bassinets (584 or 8%) and obstetric beds (577 or 8%). The share of other specialised beds then drops sharply to 4% or less of the total number, as was the case with psychiatric (316 or 4%), chronic infectious disease beds (314 or 4%) and incubators (247 or 3%). Intensive care beds comprised only a small proportion – 1%, or 111 beds.
- There were huge discrepancies, and thus inequalities, in the provision and distribution of most categories of beds in the six regions. This applied to virtually all categories of beds. In almost all nine categories Region A had the best level of provision, and in most cases the best by far, when compared with the other regions.
- Particularly conspicuous was the low percentage recorded for other acute care beds (18%) in Region E relative to the other regions, with accompanying abnormally high percentages of paediatric (21%) and other chronic beds (21%).
- Notable also was the complete absence of psychiatric beds in four of the regions (B, C, D and F); the complete lack of or existence of very few intensive care beds in all the regions, except Region A; the virtual absence of chronic infectious disease beds in four regions (B, C, D and F); and the complete lack of or existence of very few other chronic beds in Regions B, C and F.
- Generally speaking, it is clear that there is a lack of particular categories of beds particularly in Regions B, C, D and F. This illustrates the obvious underprovision in these regions, as well as the severe maldistribution of these facilities in the province as a whole. On the other hand, Regions A and E were well provided for in all or most of these categories. Relative to the rest of the province, Region A appeared in general to be quite overprovided in all categories of beds.

One of the measures of efficiency of hospitals is the bed occupancy rate which is the proportion of beds occupied over a year. This is usually expressed as a percentage and the optimum level is considered to be 70 to 80%. Occupancy rates below 50% indicate underutilisation and rates over 100% indicate overcrowding (Health Systems Trust, 1996:55). The average bed occupancy rate for the entire province is 41%. Bethlehem has the highest rate at 54% and Koffiefontein at 10% has the lowest (Health Care in the Free State, 1996).

## Conclusion

The urbanised areas in the Free State pose the biggest problem with regard to people living in poverty. This impacts directly on the health needs of such areas and the need for resources to be allocated to them.

B. de Winnaar
Department of Health and Welfare

# MAP 11 : DISTRIBUTION OF HOSPITAL BEDS

Source : REHMIS

HSRC
RGN
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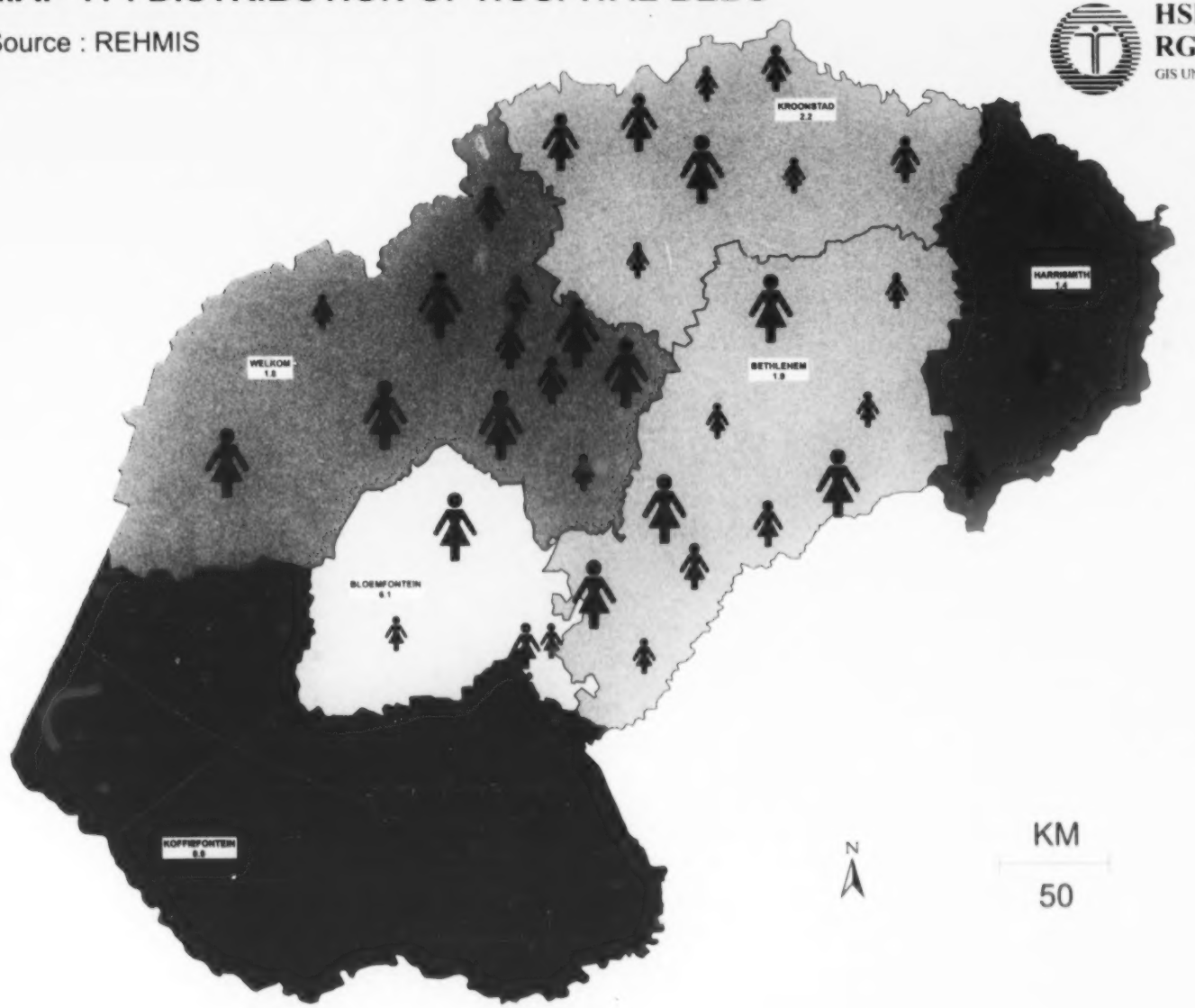



HEALTH REGION

Beds per 1000

| | |
|---|---|
| | ,9 to ,9 |
| | ,9 to 1,4 |
| | 1,4 to 1,8 |
| | 1,8 to 2,2 |
| | 2,2 to 6,1 |

MAGISTERIAL DISTRICT

Population per bed

| | |
|---|---|
| | 87 to 452 |
| | 452 to 2 171 |
| | 2 171 to 13 345 |
| | 13 345 to 39 932 |

## Table 11 Distribution of hospital beds

| DISTRICT | TOTAL POPULATION | TOTAL NO. OF BEDS | POPULATION / BED |
|---|---|---|---|
| Bethlehem | 81 395 | 353 | 231 |
| Bethulie | 9 220 | n/a | n/a |
| Bloemfontein | 309 768 | 2 829 | 109 |
| Boshof | 31 685 | n/a | n/a |
| Bothaville | 55 186 | 35 | 1 577 |
| Brandfort | 22 995 | n/a | n/a |
| Bultfontein | 28 589 | n/a | n/a |
| Clocolan | 18 342 | 39 | 470 |
| Dewetsdorp | 13 419 | n/a | n/a |
| Edenburg | 6 822 | n/a | n/a |
| Excelsior | 17 687 | n/a | n/a |
| Fauresmith | 8 859 | n/a | n/a |
| Ficksburg | 38 071 | 64 | 595 |
| Fouriesburg | 16 829 | n/a | n/a |
| Frankfort | 44 773 | 45 | 995 |
| Harrismith | 62 537 | 81 | 772 |
| Heilbron | 41 139 | 92 | 447 |
| Hennenman | 25 850 | n/a | n/a |
| Hoopstad | 27 905 | 63 | 443 |
| Jacobsdal | 11 327 | n/a | n/a |
| Jagersfontein | 6 354 | 66 | 96 |
| Koffiefontein | 10 302 | n/a | n/a |
| Koppies | 19 484 | 1 | 19 484 |
| Kroonstad | 111 880 | 577 | 194 |
| Ladybrand | 30 292 | 67 | 452 |
| Lindley | 37 673 | n/a | n/a |
| Marquard | 17 026 | n/a | n/a |
| Odendaalsrus | 106 266 | 156 | 681 |
| Parys | 51 396 | 124 | 414 |
| Petrusburg | 11 032 | n/a | n/a |
| Philippolis | 7 030 | n/a | n/a |
| Reddersburg | 6 000 | n/a | n/a |
| Reitz | 30 575 | 85 | 360 |
| Rouxville | 11 830 | n/a | n/a |
| Sasolburg | 91 079 | 159 | 573 |
| Senekal | 40 914 | 100 | 409 |
| Smithfield | 10 817 | 36 | 300 |
| Thaba 'Nchu | 66 213 | 759 | 87 |
| Theunissen | 39 932 | n/a | n/a |
| Trompsburg | 5 066 | n/a | n/a |
| Ventersburg | 14 505 | n/a | n/a |
| Viljoenskroon | 60 094 | 21 | 2 862 |
| Virginia | 82 684 | 182 | 454 |
| Vrede | 36 905 | 17 | 2 171 |
| Vredefort | 13 345 | n/a | n/a |
| Welkom | 261 473 | 435 | 601 |
| Wepener | 12 919 | n/a | n/a |
| Wesselsbron | 26 600 | n/a | n/a |
| Winburg | 17 556 | 55 | 319 |
| Witsieshoek | 391 994 | 585 | 670 |
| Zastron | 14 039 | 28 | 501 |

## 7.3 Housing

### 7.3.1 Distribution of informal housing

#### Introduction: National housing vision and housing goal

#### National housing goal

"The estimated housing backlog in South Africa is 1,5 million housing units. If the natural population growth is added to the backlog, a total of 3,5 million housing units will have to be provided over the next ten years" (White Paper, 1994:11).

Owing to the extent of unemployment in South Africa and the associated poverty, approximately 80% of those requiring housing earn less than R3 500 a month and therefore depend on government assistance to obtain a home of their own. Approximately 60% of those in need of housing earn less than R1 500 per month and are totally dependent on government assistance. (National Department of Housing, Website, 1996).

"Government's goal is to increase housing's share of the total state budget to 5%. It also intends increasing housing delivery substantially to 350 000 units a year to reach the Government of National Unity's target of 1 000 000 houses in five years" (Annual Report of the Department of Housing, 1995:6).

#### Housing and the RDP

Housing lies at the core of the Reconstruction and Development Programme (RDP), and South Africa's housing effort must serve as an engine of the economy and as a major spur to job creation.

The general value framework for housing in South Africa complements the RDP's principles and objectives. All the housing and related principles and objectives of the RDP have been incorporated into the White Paper on Housing, which addresses all policy issues regarding housing.

Primarily the RDP aims at redressing past imbalances and distortions. It addresses socio-economic backlogs at scale by providing basic services and infrastructure (including housing), providing employment and maximising employment creation in the process (Annual Report of the Department of Housing, 1995).

#### The White Paper

The housing White Paper has provided the basis for all the department's activities. It is the product of extensive consultation involving government at national and provincial level, non-governmental organisations, community representatives and the private sector.

The policy has seven major thrusts designed to turn South Africa's housing situation around:

- **Housing support for a people-driven process**
  "To help individuals and low-income families with housing, government at all levels, in conjunction with the private sector and civil society, is planning housing support mechanisms throughout the country. The White Paper clearly sets government assistance for the poor as a priority. The poor, however, cannot easily access this assistance entirely on their own. Intervention is necessary to establish a range of financial, institutional, technical and logistical support mechanisms that will enable communities to continually improve their own housing circumstances. Such mechanisms can be organised in the form of housing centres (an identifiable place or base where beneficiary families could gain access to a serviced site and the relevant subsidy package). Where required, they could receive training in materials manufacture and basic construction skills, together with the necessary information and advice to enable them to contribute directly to the design and construction of their own houses or dwellings" (Annual Report of the Department of Housing, 1995:7).

- **Stabilisation of the housing environment**
  "Many communities were in disarray when democracy dawned in South Africa. A lack of functioning local authorities, since the activities of many had been disrupted by rent, bond, and service charge boycotts, meant that even the hitherto limited stream of private sector investment had dried up. The task now is to stabilise the residential environment. Conditions conducive to investment by the public and private sectors and by individuals in these areas must be created" (Annual Report of the Department of Housing, 1995:8).

- **Consolidation and unification of housing institutions**
  "A rationalised statutory, governmental and parastatal institutional framework within which the national housing strategy will be implemented is a priority of government. Fragmentation, overlapping, wastage and inefficiencies in the institutional housing set-up must be eliminated to establish an institutional basis from which a sound long-term strategy can be launched" (Annual Report of the Department of Housing, 1995:10).

- **Encouragement of savings for housing**
  "Individual savings for housing are recognised internationally as a major route towards mobilising housing resources. A positive savings record of more than nine months qualifies a borrower for a home loan. In 1995, a nine-month savings scheme was introduced for those people who cannot afford deposits for minimum housing loans" (Annual Report of the Department of Housing, 1995:10).

- **A subsidy scheme to provide housing opportunities for millions**
  The Housing Subsidy Scheme aims at mobilising credit and is one of the cornerstones of the government's approach to the housing challenge. Its goal is to assist households that cannot provide their own housing.

- **Mobilisation of credit at scale**
  "Virtually none of the nation's savings is currently being invested in low-income housing. Therefore, the majority of the population is practically excluded from access to housing finance. The National Housing Finance Corporation (NHFC) is to address this problem and its task entails removing impediments and reducing the funding costs to small and medium lenders; limiting and spreading the risk associated with lending to low-income borrowers and providing funds for small

retail lenders; reducing interest costs to low-income borrowers; and addressing the regulatory, policy and socio-political constraints on sustained expansion of retail housing credit.

"The NHFC will constitute a long-term intervention aimed at providing structural adjustment within the established financial sector to improve access to finance for those historically denied such access. It will also, however, promote the establishment and growth of innovative alternative retail finance capacity to service market segments in which the more established sector is not yet ready to engage" (Annual Report of the Department of Housing, 1995:13).

- **Making land available for housing.**
  "The land delivery process is critical to housing. This includes the identification and allocation of undeveloped land end its transformation into serviced sites for residential development. The fragmented and extremely complex regulatory network within which land is delivered is often inadequate and in conflict with the aims and objectives of the housing strategy and the RDP.

  Short-term intervention to aid the speedy delivery of land is essential. As a result, the Development Facilitation Act was drafted and promulgated as a short-term measure. This Act makes it possible to lay down nationally uniform norms and standards for land development, offers national legislation in parallel to provincial laws as an alternative, and provides more appropriate mechanisms for transparent, rapid land delivery, an option for provincial administrations, local authorities and the private sector to adopt and utilise. This Act also provides for a Development and Planning Commission to advise the Minister on policy and laws relating to planning, development, land and infrastructure issues" (Annual Report of the Department of Housing, 1995:13).

## Obstacles to the housing delivery process in 1995

"The housing sector is coming under fire increasingly for its apparent failure to deliver. Since the first democratic general elections in April 1994, there has been a noticeable slump in housing delivery and this hiatus is causing anxiety and concern. The ongoing policy debate appears to lack decisiveness. Meanwhile, the position among the homeless is deteriorating as people battle for a stake in the dwindling supply of housing opportunities and resources" (Annual Report of the Department of Housing, 1995:17).

"Under the previous dispensation the State's housing functions were fragmented among 17 national and provincial authorities. Without a coherent national housing policy, housing activities were conducted on an inconsistent and inequitable basis. In the former TBVC states and self-governing territories, authorities paid scant attention to the growing housing needs of their communities, while in the rest of the country the Own Affairs Administrations were extravagant in their allocation of housing subsidies for the benefit of a privileged few. The most the homeless population could hope for was access to a rudimentarily serviced building site without any support in constructing even a basic shelter. Not surprising, therefore, was the size of the housing backlog inherited by the Government of National Unity" (Annual Report of the Department of Housing, 1995:17).

"Government had two options in its approach to the housing problem. It could either follow past practice by entrenching direct State provision as the primary means of housing the poor – A route that has generally been discredited throughout the world, especially in developing countries – or it could, in line with current international wisdom, adopt an enabling approach which, although results were likely to fall far short of expectations in the short term, would nevertheless offer the best chance of longer-term sustainability. In view of the magnitude of the problem, and the serious limitations on resources, Government was left with little choice but to embark on the onerous exercise of restructuring housing delivery by a process that would draw in all available capacity" (Annual Report of the Department of Housing, 1995:17).

"South Africa is fortunate in having a sophisticated construction industry and an advanced financial sector that have the capacity to meet the effective demand for housing products and services. Nevertheless, the market in which they operate is dysfunctional in that only 15% of households requiring housing are able to meet their needs in the market place without assistance. The remaining 85% depend on State support to a greater or lesser extent. To correct deficiencies in the market, a wide range of interventions to ease the logjam are necessary. These interventions refer to the seven major thrusts designed to improve South Africa's housing situation. Such interventions should be set up coherently and consistently within the framework of a national housing policy and strategy. The national Government's responsibility is therefore to establish a sustainable housing process through interventions that influence the housing market positively" (Annual Report of the Department of Housing, 1995:18).

## Housing in the Free State province

The NELF database was used to represent the percentage informal housing per district. Eskom, who developed NELF, has been critical of the level of accuracy. To test the accuracy of the housing data, the sum of formal and informal houses divided by the sum of the housing units should equal one. In the Free State this value is 0,93, which can also be stated as 7% inaccurate.

The map on informal housing indicates that the southern Free State has a low level (10 to 40%) of informal housing. The western central region has an extensive cluster of mid-range (40 to 55%) districts. The second highest range (55 to 70%) includes most of the districts in the northern half of the province and has a distinct cluster in the north-east. Thaba 'Nchu (85%), formerly of Bophuthatswana, is the only district in the highest range. The districts in the lowest range (10 to 25%) are clustered around the main industrial centres of Sasolburg, Welkom and Bloemfontein.

The housing backlog corresponds in some regions to the percentage informal housing. The housing backlog is lowest in the southern regions where the percentage informal housing is also low. The backlog is greatest in the districts surrounding Welkom and includes Bultfontein, Theunissen, Virginia, Odendaalsrus and Bothaville. Other districts where the backlog is high are Bloemfontein, Senekal, Bethlehem, Ficksburg and Sasolburg.

B. O'Leary
GIS Unit
Human Sciences Research Council

It is estimated that 127 595 families are settled informally on planned and surveyed sites, while 43 018 families are settled informally on unplanned land. It is estimated that there is a need for 66 563 planned and surveyed sites, provision of water to 57 762 sites and sanitation for 56 880 sites. To provide for future needs, it is important that reliable demographic information be readily available. This will enable service providers to plan timeously for areas where a drastic increase in population growth is envisaged. To execute planning, funds will have to be made available. Funding of projects must be undertaken by the government, district councils, local authorities and the private sector as partners. Communities will have to pay for services provided to them.

## Current initiatives

The following forms of service provision are currently undertaken:

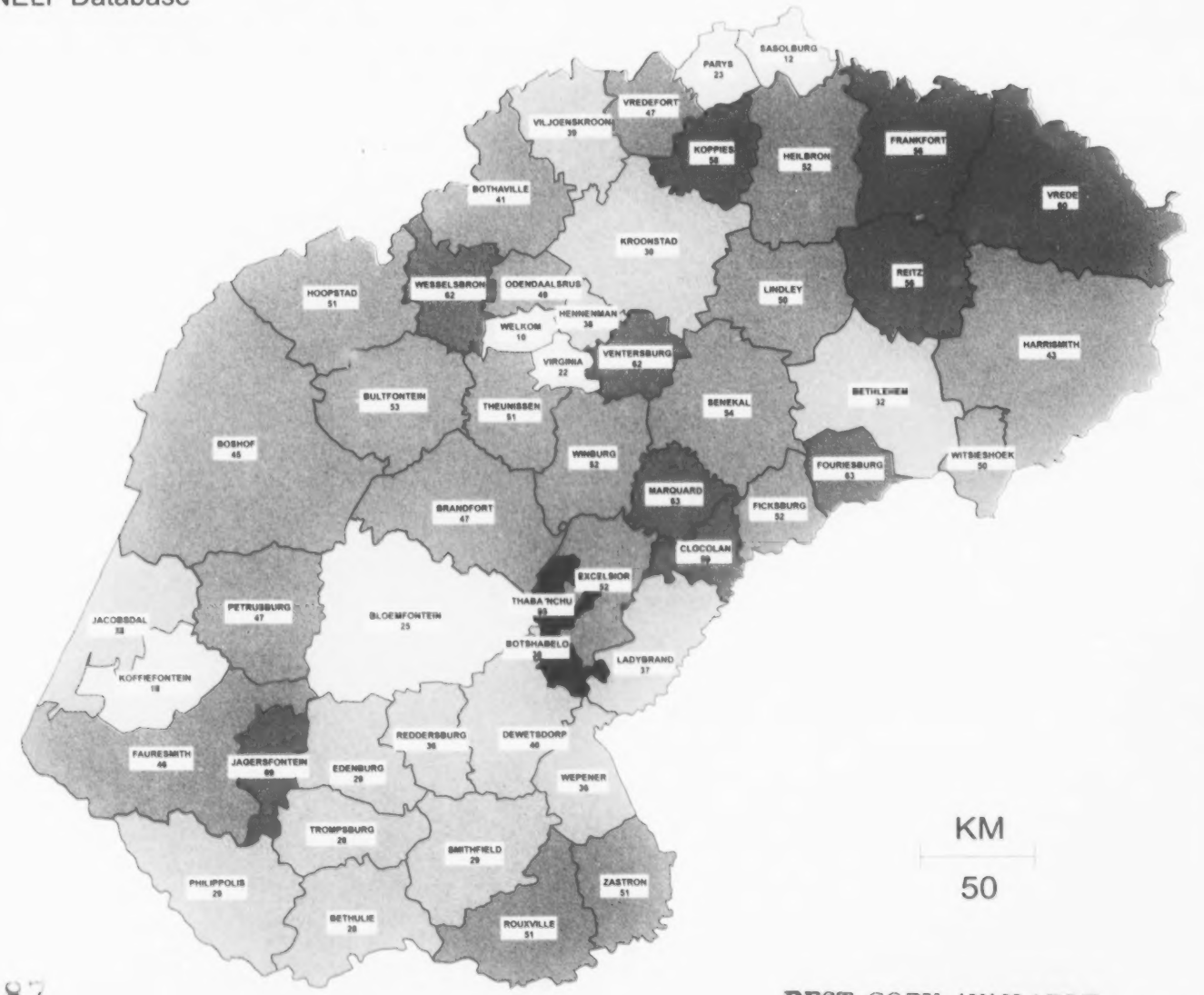
- The Bulk Connector and Infrastructure Grant. This programme aims at the elimination of the backlog regarding bulk and connector services
- The Municipal Infrastructure Programme, Extended Municipal Infrastructure Programme and Discretionary Fund Projects
- Projects financed by the Eastern, Northern and Southern Free State District Councils

P. de Bie
Department of Housing

# MAP 12 : PERCENTAGE INFORMAL HOUSING

Source : NELF Database

HSRC
RGN
GIS UNIT



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## Table 12 Percentage informal housing

| DISTRICTS | TOTAL HOUSES | TOTAL INFORMAL HOUSES | % INFORMAL HOUSES |
|---|---|---|---|
| Bethlehem | 17 880 | 5 739 | 32 |
| Bethulie | 2 202 | 613 | 28 |
| Bloemfontein | 84 104 | 21 394 | 25 |
| Boshof | 6 775 | 3 037 | 45 |
| Bothaville | 11 481 | 4 723 | 41 |
| Botshabelo | 43 894 | 16 875 | 38 |
| Brandfort | 5 510 | 2 576 | 47 |
| Bultfontein | 5 818 | 3 078 | 53 |
| Clocolan | 4 175 | 2 460 | 59 |
| Dewetsdorp | 3 098 | 1 235 | 40 |
| Edenburg | 1 661 | 477 | 29 |
| Excelsior | 3 901 | 2 029 | 52 |
| Fauresmith | 2 286 | 1 057 | 46 |
| Ficksburg | 9 233 | 4 763 | 52 |
| Fouriesburg | 3 417 | 2 142 | 63 |
| Frankfort | 9 551 | 5 367 | 56 |
| Harrismith | 12 565 | 5 447 | 43 |
| Heilbron | 8 857 | 4 579 | 52 |
| Hennenman | 5 033 | 1 926 | 38 |
| Hoopstad | 5 347 | 2 703 | 51 |
| Jacobsdal | 2 538 | 966 | 38 |
| Jagersfontein | 1 591 | 1 096 | 69 |
| Koffiefontein | 2 354 | 432 | 18 |
| Koppies | 4 353 | 2 531 | 58 |
| Kroonstad | 26 218 | 7 927 | 30 |
| Ladybrand | 8 190 | 3 028 | 37 |
| Lindley | 7 880 | 3 930 | 50 |
| Marquard | 3 551 | 2 241 | 63 |
| Odendaalsrus | 21 147 | 10 421 | 49 |
| Parys | 13 421 | 3 060 | 23 |
| Petrusburg | 2 538 | 1 197 | 47 |
| Philippolis | 1 804 | 516 | 29 |
| Reddersburg | 1 378 | 499 | 36 |
| Reitz | 6 422 | 3 620 | 56 |
| Rouxville | 2 583 | 1 325 | 51 |
| Sasolburg | 27 472 | 3 342 | 12 |
| Senekal | 9 423 | 5 097 | 54 |
| Smithfield | 2 119 | 610 | 29 |
| Thaba 'Nchu | 14 380 | 12 231 | 85 |
| Theunissen | 6 514 | 3 306 | 51 |
| Trompsburg | 1 235 | 351 | 28 |
| Ventersburg | 3 165 | 1 968 | 62 |
| Viljoenskroon | 10 098 | 3 967 | 39 |
| Virginia | 13 972 | 3 055 | 22 |
| Vrede | 7 207 | 4 302 | 60 |
| Vredefort | 3 037 | 1 437 | 47 |
| Welkom | 44 143 | 4 487 | 10 |
| Wepener | 3 217 | 1 170 | 36 |
| Wesselsbron | 5 699 | 3 521 | 62 |
| Winburg | 3 862 | 2 027 | 52 |
| Witsieshoek | 79 476 | 39 538 | 50 |
| Zastron | 3 238 | 1 654 | 51 |

### 7.3.2 Retirement facilities

#### Introduction

The current dispensation on ageing in South Africa does not take demographic realities into account. The white population is significantly older than the rest of the population. "Demographic projections indicate that over the next 20 years the proportion of elderly people in the population will increase. The annual increase of older persons will result in a total of 3,4 million aged persons by 2015. The estimated percentage of persons aged 80 years and over is increasing. Persons older than 80 years of age are particularly vulnerable, especially older women and the historically disadvantaged" (White Paper for Social Welfare, 1996:93).

#### Cost of care of the elderly

There is an unrealistic emphasis on institutional care for older persons in the white community. The average unit cost of between R11 000 and R22 000 per person per annum for institutional care indicates that the current dispensation is unaffordable. There is also an inappropriate emphasis on the government's responsibility for the care of the aged. There is limited information on services provided by informal service providers. "About 61% of the total national welfare budget is spent on social security and social welfare services for the elderly" (White Paper for Social Welfare, 1996:93). An in-depth evaluation of the present situation concerning ageing has been launched by the Department of Welfare together with all stakeholders.

#### Lack of retirement provision

"Economic conditions in South Africa are unfavourable, and few job opportunities exist. Large numbers of South Africans are unemployed, work in the informal sector or work in low-wage categories and consequently lack the means to save for their retirement. For those who are employed in the formal sector, preparation for retirement is inadequate or completely lacking. There are not enough incentives for financial provision for retirement and old age. It is as a result of these factors that elderly persons are vulnerable and are often in need of social support" (White Paper for Social Welfare, 1996:93).

#### Disparities and inappropriate services

"Racial, urban and rural disparities exist in service provision, particularly regarding old age homes. Old age homes and service centres for the elderly are occupied and used largely by whites. There are backlogs in providing facilities and services for the elderly as well as affordable housing in developing and underdeveloped communities, with an over-supply and underutilisation of other facilities and services in some communities. There is an overemphasis on institutional care and informal care is not fully acknowledged in social programming" (White Paper for Social Welfare, 1996:94).

Social support systems for the care of black older persons have disintegrated in some communities owing to a number of factors such as violence and displacement. Recreational services for older persons are mostly geographically and financially inaccessible, and are also inadequate in disadvantaged communities. There is a lack of appropriate and affordable accommodation for the elderly. Older people, especially

those who are disadvantaged, women and persons over 80 years of age are generally nutritionally vulnerable (White Paper for Social Welfare, 1996).

### Approach to ageing

"There needs to be a shift away from the notion of 'care of the aged' to 'ageing', which can be defined as a holistic and positive approach, that recognises ageing as a natural phase of life without denying the special needs of older persons. The basic principle underlying ageing is to enable older persons to live active, healthy and independent lives for as long as possible. The family is the core of the support systems for the elderly" (White Paper for Social Welfare, 1996:94).

### Community-based services

Community-based services with the family as the core support system should be the foundation of a new dispensation on ageing. A good balance should be struck between individual, family, community and government responsibility for older persons. Social systems to provide the elderly with essential social services should be developed (White Paper for Social Welfare, 1996).

### Ethics and perceptions

A generally acceptable ethical viewpoint that addresses the needs and rights of the aged is a prerequisite for a just and responsible policy. A social commitment to a holistic approach to addressing the needs of the elderly is required.

"Different and changing perceptions of old age and the social status of older persons will affect society's understanding of their welfare needs. There needs to be a good balance between an emphasis on duration of life and quality of life" (White Paper for Social Welfare, 1996:95).

### Guidelines for strategies

### National strategy

A national ageing strategy is being developed by the Department of Welfare together with all stakeholders. The following principles, guidelines and recommendations support the proposed transformation approach above (White Paper for Social Welfare, 1996):

- Every individual has the personal responsibility to provide for his or her retirement and old age.
- All organisations in civil society have the social responsibility to provide and care for their older members who are in need.
- The government has the responsibility to provide for the needs of disadvantaged, destitute and frail older persons who require 24-hour care and who do not have the financial resources to meet their own needs.
- Homes for older persons should provide only for the frail elderly. Provision of frail care should be limited to a maximum of 2% of the number of persons over 65 years.

- All old age homes have a responsibility to provide essential outreach services in the community. Creative options are required to accommodate elderly persons who are destitute or homeless.
- Appropriate, adaptable and affordable housing for older persons and their families is the cornerstone of any new dispensation. The Department of Welfare will co-operate with the Department of Housing to develop a strategy to address this need as a matter of priority.
- The Department of Welfare and welfare organisations will advocate increased access of the elderly to affordable primary health care and other basic social services, particularly in rural areas. The welfare sector will also co-operate with the Department of Health to facilitate access to nutritional programmes. These services and programmes are critical to ensuring that older persons remain in the community for as long as possible.
- All social policies and programmes will demonstrate a commitment to and promote the concept of integrating the aged into society, that is, a society in which ageing is a natural part of the life cycle.
- Social services to older persons in need will be community-based. Family care will be the baseline of age management programmes. Home care of elderly people will be encouraged. Capacity-building programmes will be provided to promote home care, including support programmes for care givers. Options such as day care, short-stay centres and outreach programmes will be explored.
- A plan of action with stakeholders to eliminate all forms of racial discrimination in government-funded services will be implemented immediately. Any planning concerning equity of services will be deeply sensitive to people's diverse values and traditions.
- The protection of the rights of older persons requires special attention given the prevalence of age discrimination, abuse and exploitation, particularly regarding social grants.

### Strategy for social security for elderly people

The government will advocate that all people in formal employment belong to a compulsory retirement scheme. Public education programmes will be provided to promote retirement planning.

- The government will also negotiate with other relevant stakeholders to ensure that retirement contributions are fully transferable when changing employment.
- Social assistance programmes will continue to be provided to support elderly people who qualify for such benefits.
- The development of a savings scheme will be explored in order to encourage individuals to take responsibility for their own retirement as well as to alleviate the pressure on the social grants system (White Paper for Social Welfare, 1996).

### Grants for elderly persons

"Grants for elderly persons comprise a large proportion of overall social assistance. The number of elderly South African beneficiaries has stabilised, with fairly good coverage (80%), but there are still particular pockets where many eligible people do not get a grant. The impact of a grant income on household income for people in poverty is dramatic. The majority of people in poverty who are not white live in three-generation households, and the grant is typically turned over for general family use. In 1993, there were 7,7 million people in households which received a state grant. For

black South Africans, each pensioner's income helped five other people in the household" (White Paper for Social Welfare, 1996:58).

### Retirement dwellings in the Free State

The South African Council for the Aged database (1996) states that there were 116 500 persons who were over the age of 65 years in the Free State during 1996. To cater for their accommodation needs, 6 516 units or dwellings were built with government aid and a further approximately 279 units or dwellings were privately developed. Thus, a total of 6 795 dwellings were established to meet the needs of 116 500 people over the age of 65, resulting in a service provision rate of 5,8%.

The map on retirement dwellings has 7,7 to 22,6% as its highest range of service provision. Twelve districts fall into this range: Bethulie (8,0%), Bultfontein (8,7%), Rouxville (8,8%), Trompsburg (9,3%), Hoopstad (10,5%), Bloemfontein (11%), Boshof (11,3%), Koppies (11,6%), Petrusburg (15,4%), Reddersburg (17,9%), Witsieshoek (20,0%) and Bothaville (22,6%). The figure for Witsieshoek has been estimated as the original 1991 Census data indicated an unreasonably high occupancy rate. The estimate was derived from districts with similar socio-economic profiles in Mpumalanga. The second highest range (5,7 to 7,7%) also consists of twelve districts, namely Welkom (6,0%), Vrede (6,2%), Frankfort and Lindley (6,4% each), Senekal (6,5%), Viljoenskroon (6,6%), Parys (6,7%), Clocolan and Kroonstad (7,0% each), Harrismith (7,5%), Virginia (7,6%) and Ventersburg (7,7%). Bloemfontein, Boshof and Hoopstad also seem to have a positive service distribution because of their proximity to Petrusburg and Reddersburg.

Different forms of housing and care provision are provided for the aged in the Free State:

- **Institutional care** has a service provision level of 8,5% for the whites and 1,1% for the blacks, while the coloureds and Indians have no institutional care.
- **Sheltered housing** caters mainly for the whites (7,0%).
- **Community services** operate mainly in urban areas and the white communities.
- **Retirement housing** is available for the financially able elderly in Bloemfontein, Bethlehem, Kroonstad and Parys.

The rural areas are the worst off and fall into the lowest range of 0 to 2,2%. These areas include Fauresmith and Jagersfontein (0%), Botshabelo (0,4%), Excelsior (0,7%), Fouriesburg (0,8%), Edenburg (0,9%), Jacobsdal (1,1%), Theunissen (1,4%), Wepener and Philippolis (1,5% each), Marquard (2,1%), Hennenman and Vredefort (2,2% each).

### Relevant issues

The following issues must be addressed to meet the needs of the elderly in the Free State:

- Whereas the white facilities are exclusive, only minimum services are available for the black and coloured elderly. Service provision needs to be equitably distributed.

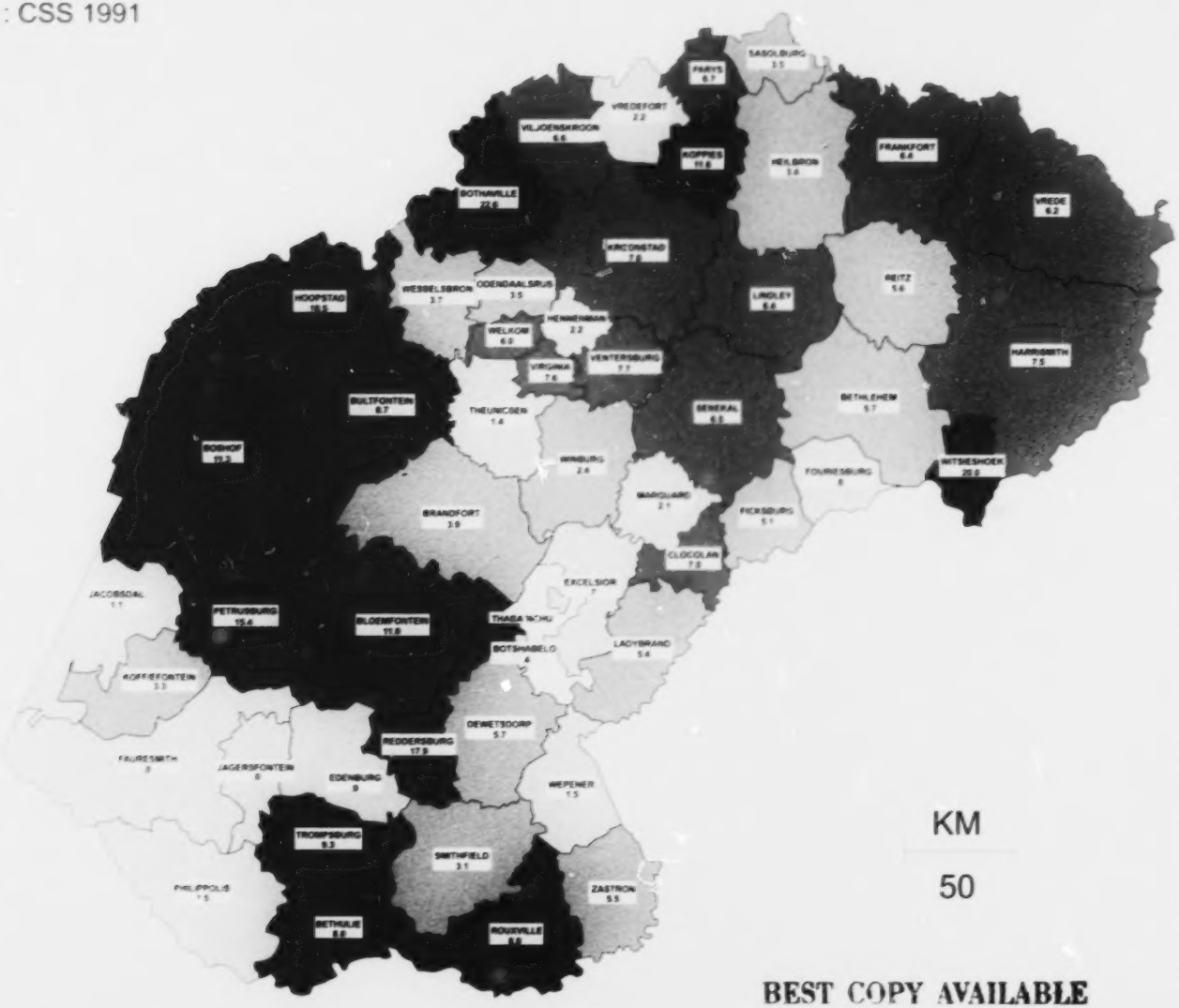
- Secondly, there are high levels of poverty in most rural areas with the result that the rural elderly are inadequately fed and are very dependent on their social pensions. The nutritional problems are aggravated by the fact that luncheon clubs have only recently been introduced in the Free State.
- Thirdly, rural areas have limited infrastructure, especially for the black elderly people.
- Fourthly, inefficient transport services and a lack of primary health care facilities restrict service provision for the aged in the Free State.

S. Eckley
The South African Council for the Aged

# MAP 13 : PERCENTAGE POPULATION AGED 65 YEARS OR OLDER IN RETIREMENT DWELLINGS

Source : CSS 1991

HSRC
RGN



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## Table 13 Percentage population aged 65 years or older in retirement dwellings

| DISTRICT | INSTITUTION POPULATION | TOTAL AGED 65 - 99 | % OCCUPANCY |
|---|---|---|---|
| Bethlehem | 197 | 3 451 | 5,7 |
| Bethulie | 54 | 675 | 8,0 |
| Bloemfontein | 1 766 | 16 112 | 11,0 |
| Boshof | 166 | 1 471 | 11,3 |
| Bothaville | 403 | 1 783 | 22,6 |
| Botshabelo | 27 | 7 445 | 0,4 |
| Brandfort | 54 | 1 379 | 3,9 |
| Bultfontein | 90 | 1 034 | 8,7 |
| Clocolan | 64 | 910 | 7,0 |
| Dewetsdorp | 41 | 723 | 5,7 |
| Edenburg | 4 | 443 | 0,9 |
| Excelsior | 6 | 901 | 0,7 |
| Fauresmith | 0 | 389 | 0,0 |
| Ficksburg | 81 | 1 593 | 5,1 |
| Fouriesburg | 6 | 771 | 0,8 |
| Frankfort | 131 | 2 053 | 6,4 |
| Harrismith | 179 | 2 397 | 7,5 |
| Heilbron | 59 | 1 744 | 3,4 |
| Hennenman | 19 | 874 | 2,2 |
| Hoopstad | 92 | 880 | 10,5 |
| Jacobsdal | 4 | 369 | 1,1 |
| Jagersfontein | 0 | 389 | 0,0 |
| Koffiefontein | 14 | 429 | 3,3 |
| Koppies | 109 | 942 | 11,6 |
| Kroonstad | 348 | 4 967 | 7,0 |
| Ladybrand | 80 | 1 489 | 5,4 |
| Lindley | 119 | 1 855 | 6,4 |
| Marquard | 16 | 745 | 2,1 |
| Odendaalsrus | 86 | 2 472 | 3,5 |
| Parys | 274 | 4 101 | 6,7 |
| Petrusburg | 89 | 578 | 15,4 |
| Philippolis | 7 | 475 | 1,5 |
| Reddersburg | 75 | 420 | 17,9 |
| Reitz | 67 | 1 199 | 5,6 |
| Rouxville | 39 | 442 | 8,8 |
| Sasolburg | 91 | 2 593 | 3,5 |
| Senekal | 121 | 1 869 | 6,5 |
| Smithfield | 13 | 421 | 3,1 |
| Thaba 'Nchu | no data | 4 031 | no data |
| Theunissen | 13 | 936 | 1,4 |
| Trompsburg | 31 | 332 | 9,3 |
| Ventersburg | 53 | 687 | 7,7 |
| Viljoenskroon | 87 | 1 315 | 6,6 |
| Virginia | 77 | 1 010 | 7,6 |
| Vrede | 105 | 1 693 | 6,2 |
| Vredefort | 14 | 645 | 2,2 |
| Welkom | 276 | 4 568 | 6,0 |
| Wepener | 9 | 601 | 1,5 |
| Wesselsbron | 33 | 882 | 3,7 |
| Winburg | 19 | 777 | 2,4 |
| Witsieshoek | estimate | estimate | 20,0 |
| Zastron | 41 | 744 | 5,5 |

## 7.4 Water and sanitation

The sections covering the national water and sanitation goal, the basic service provision policy, reconstruction and development, the water supply and sanitation policy, and its impact and future development were abridged from the Water Supply and Sanitation Policy White Paper of November 1994 and the Draft National Sanitation Policy of June 1996.

### National water and sanitation goal

The goal of the government is to ensure that all South Africans have access to essential basic water supply and sanitation services. This must be available at a cost that is affordable to households and the country as a whole.

### Basic service provision policy

"The policy of the Department of Water Affairs and Forestry, in full support of the objectives and targets of the Government's Reconstruction and Development Programme, is to ensure that all South Africans can have access to basic water supply and sanitation services within seven years or less" (White Paper, 1994:15). The following section of the White Paper provides basic guidelines for the provision of services and for capacity building and training.

"The setting of guidelines and standards must be approached with caution. Guidelines are intended to assist decision making while standards are enforceable absolute limits. The rigid application of guidelines or inappropriate standards can have the opposite effect to that intended. An example would be the closure of 'sub-standard' water supplies which forces communities to revert to sources of even worse quality" (White Paper, 1994:15).

"Given that they are chosen to be the minimum needs to ensure health, the levels of service presented below should be seen as minimum standards to be applied in publicly funded schemes unless a relaxation has been specifically approved. This does not mean that higher standards cannot be applied. However, there is a direct correlation between the standard of service and the cost, both in terms of initial capital and operation and maintenance. Where higher standards of service are to be provided, the costs will not normally be supported by the programmes of the Department" (White Paper, 1994:15).

### Reconstruction and development

"The Reconstruction and Development Programme (RDP) adopted by the Government of National Unity is more than a list of the services required to improve the quality of life of the majority of South Africans. It is not just a call for South Africans to unite to build a country free of poverty and misery. It is a programme designed to achieve this objective in an integrated and principled manner" (White Paper, 1994:1). The RDP principle of an integrated and sustainable programme has already been identified as critical to the success of service provision. It is of little value to have a water supply and sanitation strategy that is not part of a comprehensive development strategy.

"The need for development to be a people-driven process is fundamental. There is wide international experience that confirms the view that the provision of services in poor communities will fail if the people themselves are not directly involved. The involvement and empowerment of people is thus a cornerstone of the approaches proposed. One reflection of this must be the democratisation of the institutions at all levels of the sector since they are often among the first points of contact between communities and the organised State" (White Paper, 1994:6).

"Since water in particular can easily become a focus of conflict within and between communities, the development of effective delivery mechanisms must contribute to the RDP principle of achieving peace and security for all. Related to this, the very establishment of the goal of assuring that all South Africans have access to the basic services needed to ensure their health is a contribution to the process of nation-building" (White Paper, 1994:6).

Finally, the link between reconstruction and development remains a guiding concept. The RDP identifies the provision of infrastructure for services such as water supply and sanitation as one of the key elements of its strategy for developing the South African economy along its new path. The way in which services are provided must ensure that they do not simply satisfy people's basic needs, but also contribute to the growth of a dynamic economy, which is increasingly able to provide all South Africans with opportunities for a better life.

## Water supply and sanitation policy

### Policy principles

Local and international experience and the premises of the Reconstruction and Development Programme have led to the adoption of the following principles as the basis for the policy that follows. These principles assume a context of universal human rights and the equality of all persons regardless of race, gender, creed or culture.

- **Development should be demand driven and community based**

Decision making and control will be devolved as far as possible to accountable local structures. There is a reciprocal obligation on communities to accept responsibility for their own development and governance, with the assistance of the state.

- **Basic services are a human right**

This refers to a right to a level of services adequate to provide a healthy environment. It does not imply the right of an individual person or community to demand services at the expense of others.

- **"Some for All", rather than "All for Some"**

To give expression to the constitutional requirements, priority in planning and allocation of public funds will be given to those who are presently inadequately served.

- **Equitable regional allocation of development resources**

The limited national resources available to support the provision of basic services should be equitably distributed among regions, taking account of population and level of development.

- **Water has economic value**

The way in which water and sanitation services are provided must be in accordance with the growing scarcity of good quality water in South Africa in a manner that reflects its value and does not undermine long-term sustainability and economic growth.

- **The user pays**

This is a central principle to ensure sustainable and equitable development, as well as efficient and effective management.

- **Integrated development**

Water and sanitation development are not possible in isolation from development in other sectors. Co-ordination is necessary with all tiers of government and other involved parties. Maximum direct and indirect benefit must be derived from development in, for instance, education and training, job creation and the promotion of local democracy.

- **Environmental integrity**

It is necessary to ensure that the environment is considered and protected in all development activities. Appropriate protection of the environment must be applied, including if necessary even prosecution under the law. Sanitation services which have unacceptable impacts on the environment cannot be considered to be adequate.

- **Sanitation is about health**

Sanitation is far more than the construction of toilets; it is a process of improvements that must be accompanied by promotional activities as well as health and hygiene education. The aim is to encourage and assist people to improve their health and quality of life.

- **Sanitation is a community responsibility**

Improvements in health through improved sanitation are most likely to be achieved when the majority of households in a community are involved. Sanitation is therefore a community responsibility, and this must be emphasised through sanitation awareness programmes (National Sanitation Policy, 1996:4).

## Water supply

South Africa has a substantial economy with a well-developed infrastructure. However, significant inequalities exist in both distribution and access to the infrastructure. This is particularly applicable to domestic water, one of the fundamental needs.

History has shown that clean water is the single most important factor in sustainable primary health, and consequently productivity and growth of the country. Obviously water resources have a strategic interdependence that surpasses local interests if the country as a whole is to function effectively.

Many changes have taken place in South Africa since the national elections of April 1994. One of the most profound changes to impact on the future role of the Department of Water Affairs and Forestry (DWAF) was the incorporation of the former homelands into the nine national provinces. This has had the effect of a more

equitable resource disposition and a desire to redirect resources to the poorer communities. At the same time it has exposed deficiencies in administration. To correct this basic imbalance a major community water and sanitation supply programme is required. The DWAF has taken up this challenge and has assumed a new role in the provision of community water supply and sanitation (CWSS).

Basic water supply is defined as:

- Quantity: 25 litres per person per day.
- Distance: the maximum distance that a person should have to cart water to his dwelling is 200 m.
- Quality: the quality of water provided as a basic service should be in accordance with currently accepted minimum standards with respect to health-related chemical and microbial contaminants. It should also be acceptable to consumers in terms of its potability (taste, odour and appearance).
- Flow: the flow rate of water should not be less than 10 litres a minute.
- Reliability: water availability should not fail due to drought more than one year in fifty, on average (White Paper, 1994).

### Sanitation problem and its impact

Approximately 21 million South Africans do not have access to adequate sanitation facilities. Those who have inadequate sanitation may be using the bucket system, unimproved pit toilets or the veld. Furthermore, there is a disturbing increase in poorly designed or operated waterborne sewerage systems. When these fail, the impact on the health of the community and others downstream and the pollution of the environment is extremely serious.

Inadequate excreta disposal facilities, combined with unhygienic practices, represent South Africa's sanitation problem. Often the unhygienic practices are related to

- a lack of access to health and hygiene education,
- inadequate water supplies,
- poor facilities for the safe disposal of water and other domestic waste,
- inadequate toilet facilities (National Sanitation Policy, 1996).

The effects of the sanitation problem are threefold:

- **Health impact** - the impact of inadequate sanitation on the health of the poor is significant in terms of the quality of life, and the education and development potential of communities.
- **Economic impact** - poor health keeps families in a cycle of poverty and lost income. The national cost of lost productivity, reduced educational potential and curative health care is substantial.
- **Environmental effects** - inadequate sanitation leads to dispersed pollution of water sources. This in turn increases the cost of downstream water treatment, as well as the risk of disease for communities who use untreated water (National Sanitation Policy, 1996).

## Looking ahead

### Implementation approach

"The absence of a coherent national programme to improve community sanitation has left an obvious legacy. Nearly half South Africa's population does not have, within their own homes, the healthy environment promised to them by the Constitution. There is a glaring need for a structured programme to address this problem" (National Sanitation Policy, 1996:28).

"Given the limited practical experience in the field and the evolving institutional arrangements at local level, such a programme must be flexible enough to develop and change over time. It must build on the lessons of experience and reinforce the role of local government as the implementers of service provision" (National Sanitation Policy, 1996:28).

"It is therefore proposed that there be an initial two-year start-up phase. During this period, there should be an increase in funding to sanitation to start a limited number of projects in all of the provinces. Existing pilot projects and research will continue, as will the development of the health and hygiene and capacity-building 'software'. The consultation process must also continue" (National Sanitation Policy, 1996:28).

Experience gained from these activities will then be used to design and launch a full-scale national programme that can meet the ambitious goals set for the sector of meeting the basic needs of all South Africans within ten years.

### 7.4.1 Access to sanitation facilities

### Access to waterborne sewerage and septic tanks

For waterborne sewerage and septic tanks to be provided there must be running water available in the house. This does not mean that running water and waterborne sewerage or septic tanks will necessarily be provided simultaneously.

According to the map Thaba 'Nchu (14%) and Witsieshoek (6%) once again have the lowest rates of provision. In 41 of the 52 districts in the province 50% or less households have access to waterborne sewerage or septic tanks. The districts in which 50% or more households have access to these facilities are mostly centres of secondary and tertiary economic activity, except for three agricultural districts to the south and south-west of Bloemfontein.

### Access to bucket and pit latrines

There is a relatively high level of provision of bucket and pit latrines in all districts prioritised according to limited access to waterborne or septic tank sewerage systems. These cannot be upgraded as bucket and pit latrines are considered inadequate and are going to be phased out and replaced with adequate systems – at least a VIP latrine.

Thaba 'Nchu (86%) and Witsieshoek (94%) have the highest levels of access to bucket and pit latrines. However, these systems are used extensively throughout the province. The data do not distinguish between basic and improved pits, thus it may be

better to assume that most pit latrines have not been improved. This means that vast amounts of funding will be required to upgrade the present systems to at least a VIP, as 73% of households in the Free State use either bucket or pit latrines.

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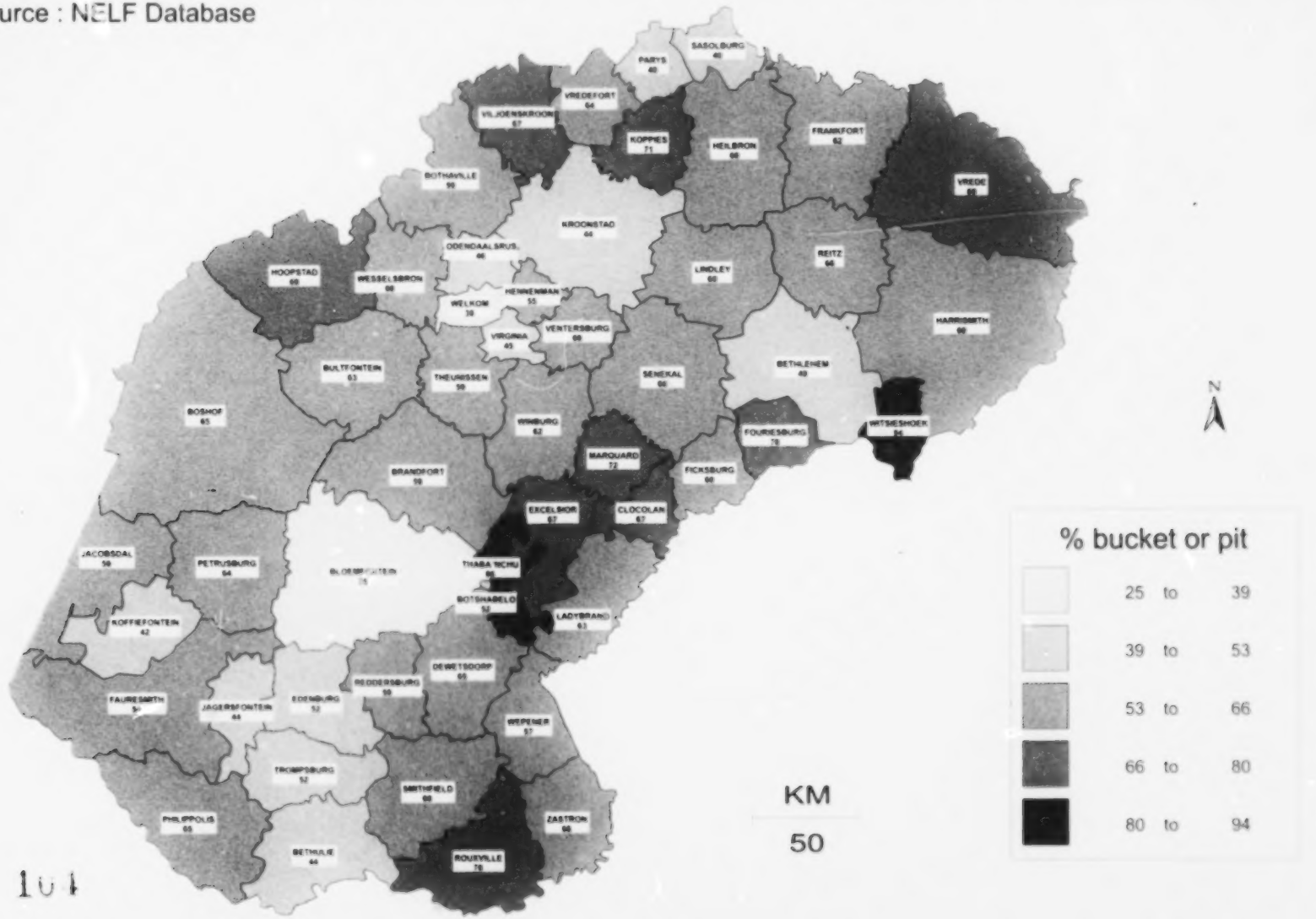
# MAP 14 : PERCENTAGE HOUSEHOLDS WITH ACCESS TO BUCKET AND PIT LATRINE FACILIT

Source : NELF Database



## Table 14 Percentage households with access to bucket and pit latrine facilities

| DISTRICT | HOUSES | BUCKET | PIT | % BUCKET AND PIT |
|---|---|---|---|---|
| Bethlehem | 17 880 | 357 | 8 467 | 49,4 |
| Bethulie | 2 202 | 90 | 887 | 44,4 |
| Bloemfontein | 84 104 | 1 951 | 18 733 | 24,6 |
| Boshof | 6 775 | 111 | 4 309 | 65,2 |
| Bothaville | 11 481 | 202 | 6 566 | 58,9 |
| Botshabelo | 43 894 | 3 950 | 18 873 | 52,0 |
| Brandfort | 5 510 | 190 | 3 058 | 58,9 |
| Bultfontein | 5 818 | 200 | 3 475 | 63,2 |
| Clocolan | 4 175 | 148 | 2 647 | 66,9 |
| Dewetsdorp | 3 098 | 85 | 1 942 | 65,4 |
| Edenburg | 1 661 | 63 | 801 | 52,0 |
| Excelsior | 3 901 | 118 | 2 514 | 67,5 |
| Fauresmith | 2 286 | 53 | 1 177 | 53,8 |
| Ficksburg | 9 233 | 398 | 5 126 | 59,8 |
| Fouriesburg | 3 417 | 83 | 2 579 | 77,9 |
| Frankfort | 9 551 | 358 | 5 588 | 62,3 |
| Harrismith | 12 565 | 341 | 7 182 | 59,9 |
| Heilbron | 8 857 | 134 | 5 216 | 60,4 |
| Hennenman | 5 033 | 166 | 2 585 | 54,7 |
| Hoopstad | 5 347 | 47 | 3 655 | 69,2 |
| Jacobsdal | 2 538 | 39 | 1 469 | 59,4 |
| Jagersfontein | 1 591 | 89 | 617 | 44,4 |
| Koffiefontein | 2 354 | 100 | 897 | 42,4 |
| Koppies | 4 353 | 45 | 3 033 | 70,7 |
| Kroonstad | 26 218 | 618 | 10 794 | 43,5 |
| Ladybrand | 8 190 | 178 | 4 979 | 63,0 |
| Lindley | 7 880 | 339 | 4 386 | 60,0 |
| Marquard | 3 551 | 39 | 2 518 | 72,0 |
| Odendaalsrus | 21 147 | 727 | 8 934 | 45,7 |
| Parys | 13 421 | 367 | 4 988 | 39,9 |
| Petrusburg | 2 538 | 54 | 1 573 | 64,1 |
| Philippolis | 1 804 | 46 | 1 135 | 65,5 |
| Reddersburg | 1 378 | 42 | 765 | 58,6 |
| Reitz | 6 422 | 190 | 4 057 | 66,1 |
| Rouxville | 2 583 | 28 | 1 790 | 70,4 |
| Sasolburg | 27 472 | 879 | 10 148 | 40,1 |
| Senekal | 9 423 | 344 | 5 918 | 66,5 |
| Smithfield | 2 119 | 81 | 1 186 | 59,8 |
| Thaba 'Nchu | 14 380 | 82 | 12 346 | 86,4 |
| Theunissen | 6 514 | 330 | 3 519 | 59,1 |
| Trompsburg | 1 235 | 31 | 613 | 52,1 |
| Ventersburg | 3 165 | 145 | 1 746 | 59,7 |
| Viljoenskroon | 10 098 | 228 | 6 556 | 67,2 |
| Virginia | 13 972 | 273 | 6 081 | 45,5 |
| Vrede | 7 207 | 187 | 4 815 | 69,4 |
| Vredefort | 3 037 | 110 | 1 834 | 64,0 |
| Welkom | 44 143 | 817 | 16 063 | 38,2 |
| Wepener | 3 217 | 66 | 1 759 | 56,7 |
| Wesselsbron | 5 699 | 281 | 3 153 | 60,3 |
| Winburg | 3 862 | 154 | 2 250 | 62,2 |
| Witsieshoek | 79 476 | 265 | 74 134 | 93,6 |
| Zastron | 3 238 | 95 | 2 034 | 65,8 |

# MAP 15 : PERCENTAGE HOUSEHOLDS WITH ACCESS TO SEPTIC TANK OR WATERBORNE LATRINE FACILITIES

Source: NELF Database

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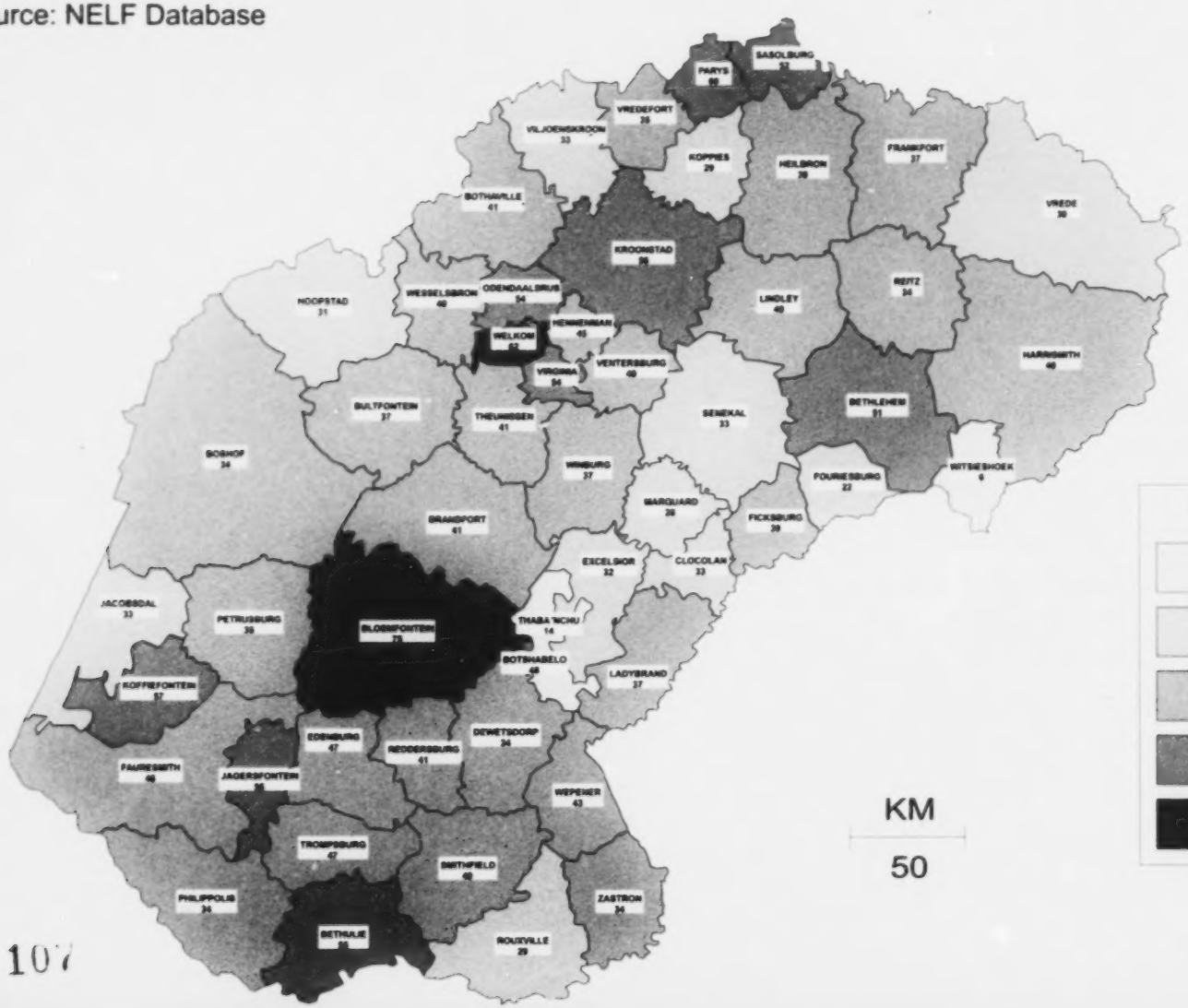

## Table 15 Percentage households with access to septic tank or waterborne latrine facilities

| DISTRICT | HOUSES | WATERBORNE | SEPTIC TANK | % WATERBORNE AND SEPTIC TANK |
|---|---|---|---|---|
| Bethlehem | 17 880 | 8 288 | 743 | 50,5 |
| Bethulie | 2 202 | 1 109 | 101 | 55,0 |
| Bloemfontein | 84 104 | 62 713 | 641 | 75,3 |
| Boshof | 6 775 | 1 460 | 867 | 34,3 |
| Bothaville | 11 481 | 3 644 | 1 052 | 40,9 |
| Botshabelo | 43 894 | 21 066 | 0 | 47,9 |
| Brandfort | 5 510 | 1 802 | 443 | 40,7 |
| Bultfontein | 5 818 | 1 595 | 535 | 36,6 |
| Clocolan | 4 175 | 1 130 | 238 | 32,8 |
| Dewetsdorp | 3 098 | 731 | 328 | 34,2 |
| Edenburg | 1 661 | 667 | 119 | 47,3 |
| Excelsior | 3 901 | 1 013 | 244 | 32,2 |
| Fauresmith | 2 286 | 786 | 255 | 45,5 |
| Ficksburg | 9 233 | 3 233 | 357 | 38,9 |
| Fouriesburg | 3 417 | 551 | 193 | 21,8 |
| Frankfort | 9 551 | 3 107 | 474 | 37,5 |
| Harrismith | 12 565 | 4 356 | 663 | 39,9 |
| Heilbron | 8 857 | 2 905 | 585 | 39,4 |
| Hennenman | 5 033 | 2 010 | 258 | 45,1 |
| Hoopstad | 5 347 | 887 | 744 | 30,5 |
| Jacobsdal | 2 538 | 495 | 350 | 33,3 |
| Jagersfontein | 1 591 | 808 | 69 | 55,1 |
| Koffiefontein | 2 354 | 1 230 | 113 | 57,1 |
| Koppies | 4 353 | 873 | 388 | 29,0 |
| Kroonstad | 26 218 | 13 993 | 791 | 56,4 |
| Ladybrand | 8 190 | 2 620 | 397 | 36,8 |
| Lindley | 7 880 | 2 709 | 419 | 39,7 |
| Marquard | 3 551 | 755 | 225 | 27,6 |
| Odendaalsrus | 21 147 | 10 498 | 971 | 54,2 |
| Parys | 13 421 | 7 832 | 223 | 60,0 |
| Petrusburg | 2 538 | 599 | 298 | 35,3 |
| Philippolis | 1 804 | 462 | 153 | 34,1 |
| Reddersburg | 1 378 | 422 | 137 | 40,6 |
| Reitz | 6 422 | 1 672 | 489 | 33,6 |
| Rouxville | 2 583 | 554 | 200 | 29,2 |
| Sasolburg | 27 472 | 13 657 | 524 | 51,6 |
| Senekal | 9 423 | 2 735 | 405 | 33,3 |
| Smithfield | 2 119 | 642 | 201 | 39,8 |
| Thaba 'Nchu | 14 380 | 1 702 | 244 | 13,5 |
| Theunissen | 6 514 | 2 164 | 489 | 40,7 |
| Trompsburg | 1 235 | 470 | 113 | 47,2 |
| Ventersburg | 3 165 | 1 085 | 180 | 40,0 |
| Viljoenskroon | 10 098 | 1 826 | 1 476 | 32,7 |
| Virginia | 13 972 | 6 857 | 750 | 54,4 |
| Vrede | 7 207 | 1 705 | 484 | 30,4 |
| Vredefort | 3 037 | 832 | 246 | 35,5 |
| Welkom | 44 143 | 26 405 | 823 | 61,7 |
| Wepener | 3 217 | 1 165 | 213 | 42,8 |
| Wesselsbron | 5 699 | 1 866 | 387 | 39,5 |
| Winburg | 3 862 | 1 234 | 213 | 37,5 |
| Witsieshoek | 79 476 | 3 532 | 1 536 | 6,4 |
| Zastron | 3 238 | 879 | 216 | 33,8 |

### 7.4.2 Access to water facilities

The data source for this provincial analysis was the NELF database developed by Eskom in 1994. The accuracy of this database has been questioned within Eskom. This can be tested by summing the percentages of households with access to in-house water, garden taps only, community taps only and no water supply, which should total 100%. Fifty-one of the 52 districts in the Free State exceeded 99% accuracy. Sasolburg has 92% accuracy.

#### On-site water provision

Households with running water in the house or in the garden only fall into this category. From the map it is immediately apparent is that the former black districts of Thaba 'Nchu (Bophutatswana) and Witsieshoek (QwaQwa) have very low levels of on-site provision and that their former white neighbours have much higher levels of provision. Thaba 'Nchu has 60% less provision than Bloemfontein and Witsieshoek 43% less than Bethlehem.

Bloemfontein, the capital, and the southern districts, the Goldfields districts around Welkom, the oil refinery disticts near Sasolburg, and the commercial and light industrial centre of Bethlehem are all comparatively well provided for. Vast areas of the province are agricultural and many of these have less than 50% access to on-site water.

#### Off-site water provision

Households that rely on community taps located in streets fall into this category. Districts that have low levels of on-site provision tend to rely heavily on community taps. As expected, Witsieshoek (49%) and Thaba 'Nchu (41%) have relatively high percentages of households with access to community taps. Botshabelo (40%), adjacent to Thaba 'Nchu, also has a high percentage of access to this facility. Fouriesburg (40%) and Rouxville (38%) are former white districts that also have a high percentage of access to community taps.

The percentage of households with no access to water supplies is highest in Thaba 'Nchu (44%) and Witsieshoek (40%). Twenty-four of the 52 districts have more than 25% of households with no access to water. These are clustered in the north-east, north, west, south-west, and in a band to the east of Bloemfontein.

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#### Current initiatives

Besides Witsieshoek and some of the farming communities, the people of the province are generally well served with water. Sanitation, however, remains a problem in the peri-urban informal settlements and the former homeland areas. Amid high expectations, the Department of Water Affairs and Forestry's CWSS programme is providing basic RDP services to the rural areas (mostly Witsieshoek and Thaba 'Nchu).

A policy to address the problems of the farming communities is required, as is a change of attitude to payment and care of services. This will increase the ability to sustain higher levels of water provision and sanitation services.

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Department of Water Affairs and Forestry

# MAP 16 : PERCENTAGE HOUSEHOLDS WITH ACCESS TO ON-SITE WATER FACILITIES

Source : NELF Database

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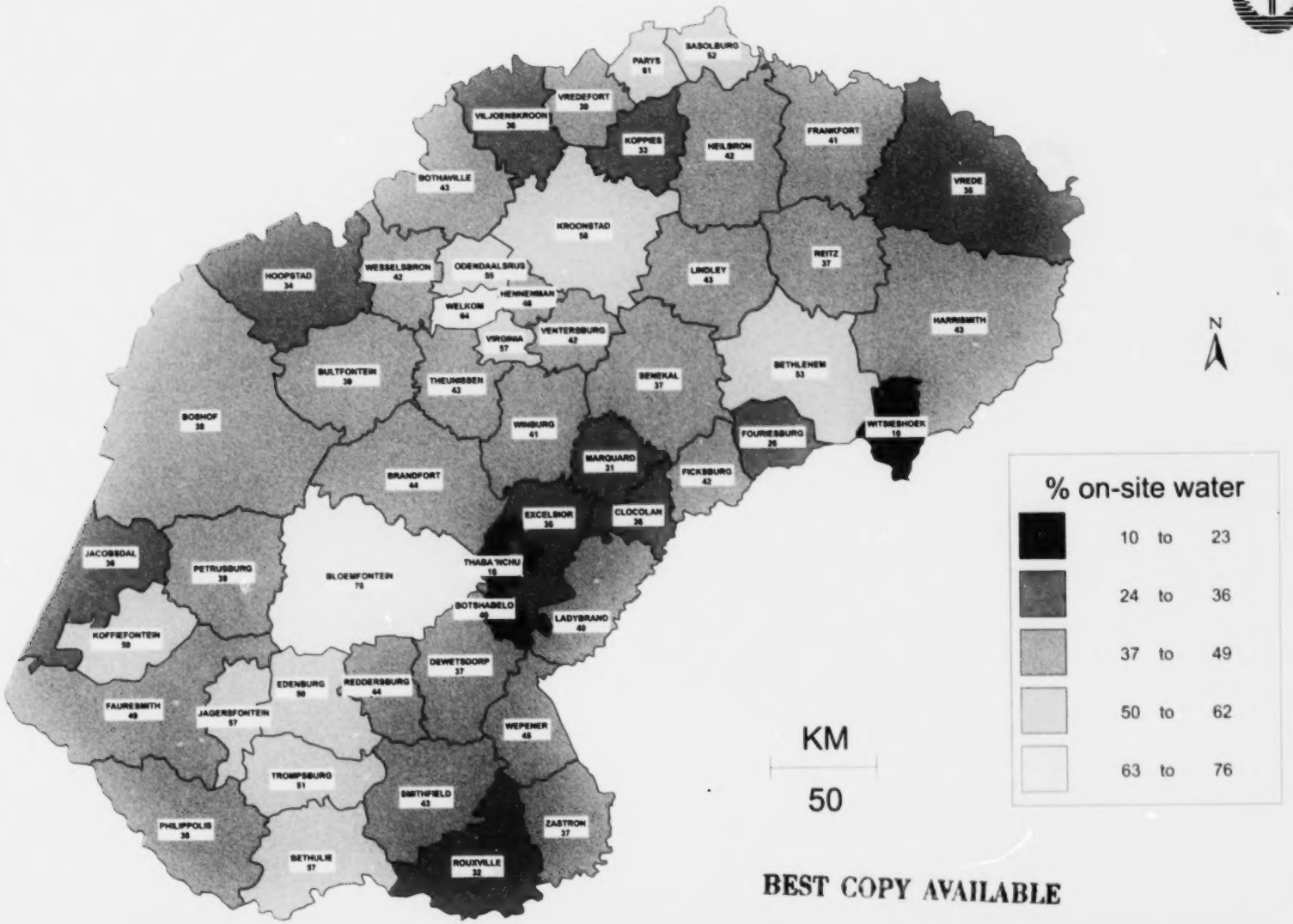
GIS UNIT



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## Table 16 Percentage households with access to on-site water facilities

| DISTRICT | HOUSES | INHOUSE WATER | ONSITE WATER | % INHOUSE AND ONSITE WATER |
|---|---|---|---|---|
| Bethlehem | 17 880 | 7 776 | 1 626 | 52,6 |
| Bethulie | 2 202 | 1 058 | 203 | 57,3 |
| Bloemfontein | 84 104 | 51 972 | 12 349 | 76,5 |
| Boshof | 6 775 | 1 542 | 1 018 | 37,8 |
| Bothaville | 11 481 | 2 810 | 2 111 | 42,9 |
| Botshabelo | 43 894 | 13 238 | 8 268 | 49,0 |
| Brandfort | 5 510 | 1 576 | 827 | 43,6 |
| Bultfontein | 5 818 | 1 133 | 1 156 | 39,3 |
| Clocolan | 4 175 | 889 | 618 | 36,1 |
| Dewetsdorp | 3 098 | 723 | 432 | 37,3 |
| Edenburg | 1 661 | 714 | 119 | 50,2 |
| Excelsior | 3 901 | 1 002 | 380 | 35,4 |
| Fauresmith | 2 286 | 593 | 522 | 48,8 |
| Ficksburg | 9 233 | 2 598 | 1 241 | 41,6 |
| Fouriesburg | 3 417 | 563 | 325 | 26,0 |
| Frankfort | 9 551 | 2 483 | 1 413 | 40,8 |
| Harrismith | 12 565 | 4 372 | 1 047 | 43,1 |
| Heilbron | 8 857 | 2 525 | 1 224 | 42,3 |
| Hennenman | 5 033 | 1 914 | 502 | 48,0 |
| Hoopstad | 5 347 | 722 | 1 086 | 33,8 |
| Jacobsdal | 2 538 | 556 | 366 | 36,3 |
| Jagersfontein | 1 591 | 366 | 537 | 56,8 |
| Koffiefontein | 2 354 | 1 168 | 218 | 58,9 |
| Koppies | 4 353 | 736 | 687 | 32,7 |
| Kroonstad | 26 218 | 11 709 | 3 444 | 57,8 |
| Ladybrand | 8 190 | 2 652 | 592 | 39,6 |
| Lindley | 7 880 | 2 176 | 1 181 | 42,6 |
| Marquard | 3 551 | 684 | 426 | 31,3 |
| Odendaalsrus | 21 147 | 6 500 | 5 160 | 55,1 |
| Parys | 13 421 | 6 790 | 1 383 | 60,9 |
| Petrusburg | 2 538 | 647 | 335 | 38,7 |
| Philippolis | 1 804 | 488 | 194 | 37,8 |
| Reddersburg | 1 378 | 447 | 155 | 43,7 |
| Reitz | 6 422 | 1 482 | 906 | 37,2 |
| Rouxville | 2 583 | 544 | 293 | 32,4 |
| Sasolburg | 27 472 | 13 139 | 1 266 | 52,4 |
| Senekal | 9 423 | 2 550 | 909 | 36,7 |
| Smithfield | 2 119 | 695 | 209 | 42,7 |
| Thaba 'Nchu | 14 380 | 1 724 | 508 | 15,5 |
| Theunissen | 6 514 | 1 595 | 1 212 | 43,1 |
| Trompsburg | 1 235 | 509 | 119 | 50,9 |
| Ventersburg | 3 165 | 590 | 755 | 42,5 |
| Viljoenskroon | 10 098 | 2 022 | 1 570 | 35,6 |
| Virginia | 13 972 | 6 428 | 1 504 | 56,8 |
| Vrede | 7 207 | 1 663 | 828 | 34,6 |
| Vredefort | 3 037 | 785 | 408 | 39,3 |
| Welkom | 44 143 | 25 483 | 2 562 | 63,5 |
| Wepener | 3 217 | 1 068 | 387 | 45,2 |
| Wesselsbron | 5 699 | 986 | 1 415 | 42,1 |
| Winburg | 3 862 | 924 | 641 | 40,5 |
| Witsieshoek | 79 476 | 3 429 | 4 737 | 10,3 |
| Zastron | 3 238 | 818 | 385 | 37,2 |

# MAP 17 : PERCENTAGE HOUSEHOLDS WITH ACCESS TO OFF-SITE WATER FACILITIES

Source : NELF Database

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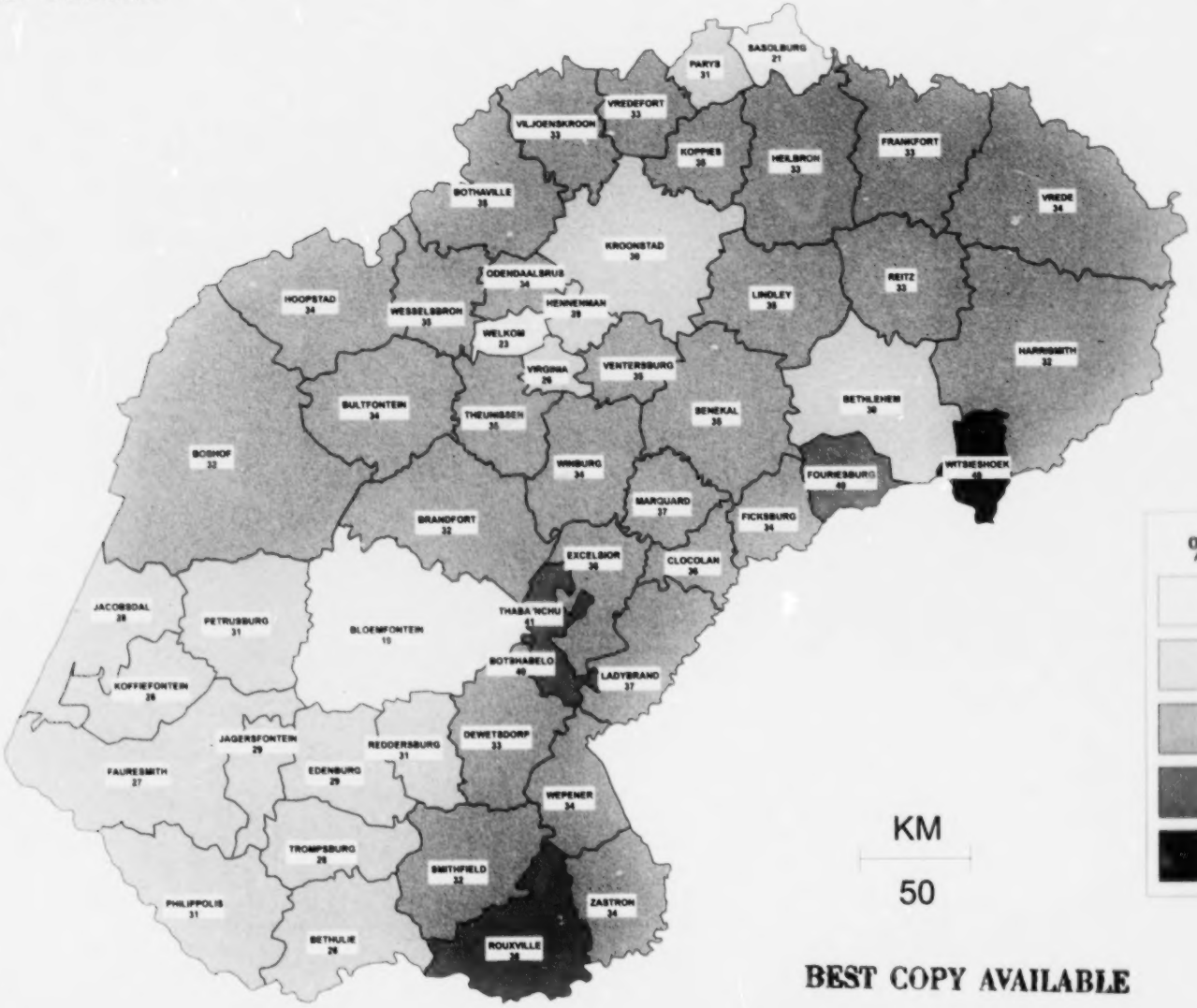




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## Table 17 Percentage households with access to off-site water facilities

| DISTRICT | HOUSES | COMMUNITY TAP | % HOUSES ACCESSING COMMUNITY TAPS ONLY |
|---|---|---|---|
| Bethlehem | 17 880 | 5 433 | 30,4 |
| Bethulie | 2 202 | 582 | 26,4 |
| Bloemfontein | 84 104 | 16 054 | 19,1 |
| Boshof | 6 775 | 2 151 | 31,7 |
| Bothaville | 11 481 | 4 063 | 35,4 |
| Botshabelo | 43 894 | 17 555 | 39,9 |
| Brandfort | 5 510 | 1 756 | 31,9 |
| Bultfontein | 5 818 | 1 963 | 33,7 |
| Clocolan | 4 175 | 1 496 | 35,8 |
| Dewetsdorp | 3 098 | 1 028 | 33,2 |
| Edenburg | 1 661 | 476 | 28,7 |
| Excelsior | 3 901 | 1 404 | 36,0 |
| Fauresmith | 2 286 | 607 | 26,6 |
| Ficksburg | 9 233 | 3 143 | 34,0 |
| Fouriesburg | 3 417 | 1 352 | 39,6 |
| Frankfort | 9 551 | 3 166 | 33,1 |
| Harrismith | 12 565 | 3 961 | 31,5 |
| Heilbron | 8 857 | 2 931 | 33,1 |
| Hennenman | 5 033 | 1 426 | 28,3 |
| Hoopstad | 5 347 | 1 819 | 34,0 |
| Jacobsdal | 2 538 | 718 | 28,3 |
| Jagersfontein | 1 591 | 466 | 29,3 |
| Koffiefontein | 2 354 | 611 | 26,0 |
| Koppies | 4 353 | 1 529 | 35,1 |
| Kroonstad | 26 218 | 7 810 | 29,8 |
| Ladybrand | 8 190 | 3 049 | 37,2 |
| Lindley | 7 880 | 2 749 | 34,9 |
| Marquard | 3 551 | 1 318 | 37,1 |
| Odendaalsrus | 21 147 | 7 212 | 34,1 |
| Parys | 13 421 | 4 164 | 31,0 |
| Petrusburg | 2 538 | 796 | 31,4 |
| Philippolis | 1 804 | 565 | 31,3 |
| Reddersburg | 1 378 | 427 | 31,0 |
| Reitz | 6 422 | 2 137 | 33,3 |
| Rouxville | 2 583 | 983 | 38,1 |
| Sasolburg | 27 472 | 5 669 | 20,6 |
| Senekal | 9 423 | 3 342 | 35,5 |
| Smithfield | 2 119 | 686 | 32,4 |
| Thaba 'Nchu | 14 380 | 5 847 | 40,7 |
| Theunissen | 6 514 | 2 291 | 35,2 |
| Trompsburg | 1 235 | 343 | 27,8 |
| Ventersburg | 3 165 | 1 102 | 34,8 |
| Viljoenskroon | 10 098 | 3 365 | 33,3 |
| Virginia | 13 972 | 3 563 | 25,5 |
| Vrede | 7 207 | 2 426 | 33,7 |
| Vredefort | 3 037 | 998 | 32,9 |
| Welkom | 44 143 | 10 075 | 22,8 |
| Wepener | 3 217 | 1 093 | 34,0 |
| Wesselsbron | 5 699 | 1 993 | 35,0 |
| Winburg | 3 862 | 1 313 | 34,0 |
| Witsieshoek | 79 476 | 39 130 | 49,2 |
| Zastron | 3 238 | 1 116 | 34,5 |

## 7.5 Electricity

### Introduction

Experience in other countries shows that substantial economic growth is not achieved until the large majority of the population has access to electricity. Electrification and economic growth go hand in hand. This does not mean that introducing electricity to an underserviced area without other social and infrastructural services is going to positively influence "rural-urban migration, population growth, education and literacy. It is only in countries such as the USA where broad rural development and employment programmes, in conjunction with electrification, have significantly improved the rural quality of life and reduced rural to urban migration" (Golding, 1992:2).

"Eskom has accelerated its electrification thrust over the past two years and its programme is on target. Eskom has electrified 639 741 homes since the electrification drive began at the end of 1990. This programme will positively affect the lives of more than eleven million people. It will give them access to a clean, affordable and convenient source of energy and allow them to become part of a modern industrially developing society" (Maree, 1995:3).

### The electrification project

### Background

The electrification project began in 1990 in order to bring the benefits that access to electricity brings to more South Africans.

"In 1992 a survey was conducted in South Africa to determine the status of electrification in cities and towns, in trust areas, and in TBVC countries and national states. It was revealed that out of a total of 7,2 million homes, only 3 million were at that stage provided with electricity. This left an enormous 4,2 million homes without, only about 2 million of which could possibly be furnished cost effectively with electricity. The remainder would be difficult to electrify due to either the structure of the dwelling, the distance from the existing grid, lack of access to alternative energy sources, or simply as a matter of affordability" (The electrification project, 1995:1).

Once it was agreed that little economic growth could occur without the widespread use of electricity, Eskom committed itself to the electrification of almost one million homes over the following five years, in areas where it had the right to supply. Given the economic recession, the time was ripe to put innovative technology to the test. Eskom decided to follow the route of the "prepayment meter or electricity dispenser" (The electrification project, 1995:1), which had been used successfully in other countries.

### Electricity supplies in rural areas

Both dense and scattered rural settlements, which are located primarily in former homeland areas, have exceptionally low levels of access to electricity. Furthermore, demographic and electrification data concerning farm workers on commercial farms appear to be inadequate to support electrification planning.

"Many of the homes still needing electricity are situated far from the national grid in remote rural areas with a low-density population. At present only 12% of rural households have access to electricity. Eskom's electrification programme will raise this figure to 30% in 1999 and will have a positive effect on the quality of life. The cost of bringing network electricity to such areas will be very high. Eskom is constantly researching ways to substantially reduce the cost of rural electrification through appropriate technology" (Morgan, 1995:7).

### Eskom and the RDP

Following the adoption of the Reconstruction and Development White Paper by parliament, Eskom published ten commitments demonstrating its support of the RDP. Many of these activities were already under way in the organisation and therefore reflect a change in degree rather than direction for Eskom.

### RDP commitments

Eskom undertook the following:

- Further reduce the real price of electricity by 15%, so as to become the world's lowest cost supplier of electricity
- Electrify an additional 1 750 000 homes, improving the lives of 11 million South Africans
- Change the staffing profile so that 50% of management, professional and supervisory staff would be black South Africans
- Educate, train and upgrade sufficient numbers of people to meet Eskom's future managerial, technical and other professional staff needs, *inter alia* by employing 370 black trainees and bursars per year, and enabling all Eskom employees to become literate
- Maintain transparency and engage in worker consultation in decision making
- Contribute R50 million per year to electrification of schools and clinics, and other community development activities, particularly in rural areas
- Enable all Eskom employees to own a home
- Encourage small and medium enterprise development, through Eskom's buying policies and giving of managerial support
- Protect the environment
- Finance the above from own resources and from overseas development funding (Morgan, 1995:1)

### National electrification planning - resources and institutions

"There is no national institution capable of co-ordinating and planning the national electrification programme. At present, planning takes place within each distribution agency, and Eskom assumes responsibility for the bulk of the connections targeted annually. Many municipal distributors have embarked on electrification programmes and conduct in-house planning. However, there is no overall national co-ordination of these activities, and no mechanism to ensure that the targets set by the RDP will be met. Eskom dominates planning for the electrification programme and its implementation, but has no jurisdiction in regions outside its supply areas. The National Electricity Regulator may be in a position to fill this institutional vacuum,

but at present has limited capacity to monitor progress or to undertake detailed planning" (Davis, 1996: 477).

"Resources are also limited. Despite improvements over the past few years, there are large inadequacies in the data for many areas of the country. Eskom has begun to refine the demographic and electrification data, but is likely to concentrate on its own areas of supply. It will be some time before these data resources are developed to a point where accurate supply-side and demand-side information is available for the many municipal distributors around the country" (Davis,1996: 477).

"Despite the limitations, national electrification targets have been set, at least until the year 2000, and the success of the programme will inevitably be judged in relation to these targets. But are national targets desirable? Although they have succeeded in increasing the rate of electrification, they favour a centralised planning and implementation system. But not only does centralised planning require extensive resources, it also affects the process of electrification and the ability of communities to participate in it effectively. The alternative approach is decentralised and demand-driven, with control over investment decisions located at lower tiers. Under this system, there is less need for a national planning institution. Instead more emphasis is placed on the need to monitor progress and provide adequate support to lower-tier organisations" (Davis,1996: 477).

### NELF and the regulator

"The National Electrification Forum (NELF) has completed the majority of its work and made an initial recommendation to Government that the distribution sector of the industry should be rationalised, national tariff systems should be implemented and that a national electricity regulatory authority should be established to oversee the industry. The result will be that many local governments will retain the right of supply in their areas. The National Electricity Regulator (NER) will be responsible for licensing all suppliers and ensuring that they perform to set standards" (Morgan, 1995:13).

This means that Eskom will have to be licensed and in future will be subject to regulatory jurisdiction. Also, Eskom will become responsible for supplies in large areas of the previous TBVC states and self-governing territories, while possibly handing over staff and assets in some urban areas where it is presently operative.

### Community relations

### Small business development and job creation

"The electrification programme provides employment for over 4 000 people involved in construction: 2 200 from Eskom and the balance as contractors employed by Eskom. In addition, about 2 300 people are employed in the local manufacturing industry to provide the materials required. Over a thousand people are employed in marketing, maintenance and administration functions in newly electrified areas. Where possible, Eskom uses subcontractors from small businesses in underdeveloped and electrification areas. Training programmes aim at employing members from the local community. Capital development projects affected more than a million people in 1994" (Morgan, 1995:11).

### Community development

"Eskom actively promotes community development through programmes designed to assist disadvantaged communities with a strong emphasis on education. Only projects at grassroots level with community support and accountability are supported. Over the past four years funding has risen from R4 million to approximately R40 million annually" (Morgan, 1995:12).

"In support of the electrification programme and Eskom's RDP commitments, Eskom increased its community development contribution by electrifying 562 schools and 21 clinics in 1994. During 1994, the Norwegian Agency for Development Cooperation pledged R15,2 million in grant funding for the electrification of schools and clinics" (Morgan, 1995:12).

### 7.5.1 Electrification of formal housing

The map on electrified formal housing has 76 to 94% as its highest range. In this range are two main clusters of districts: the first is Bloemfontein (78%) and Brandfort (77%), and the second is Clocolan (86%), Ficksburg (91%), Fouriesburg (94%), Senekal (79%), Kroonstad (81%) and Odendaalsrus (80%). The second highest range (58 to 76%) is clustered in the eastern Free State and includes Witsieshoek (66%), Bethlehem (76%), Reitz (68%), Vrede (69%) and Harrismith (74%). Other districts in the 58 to 76% range are dispersed but generally adjacent to clusters in the highest range. The lower three ranges include districts around the Bloemfontein-Brandfort highest range cluster, indicating a large difference in the level of provision between this high range cluster and the surrounding districts.

Botshabelo (5%) has the lowest level of provision. This is far less than the former black areas of Thaba 'Nchu (56%) and Witsieshoek (66%). There are 26 former white districts that have lower levels of provision than Thaba 'Nchu.

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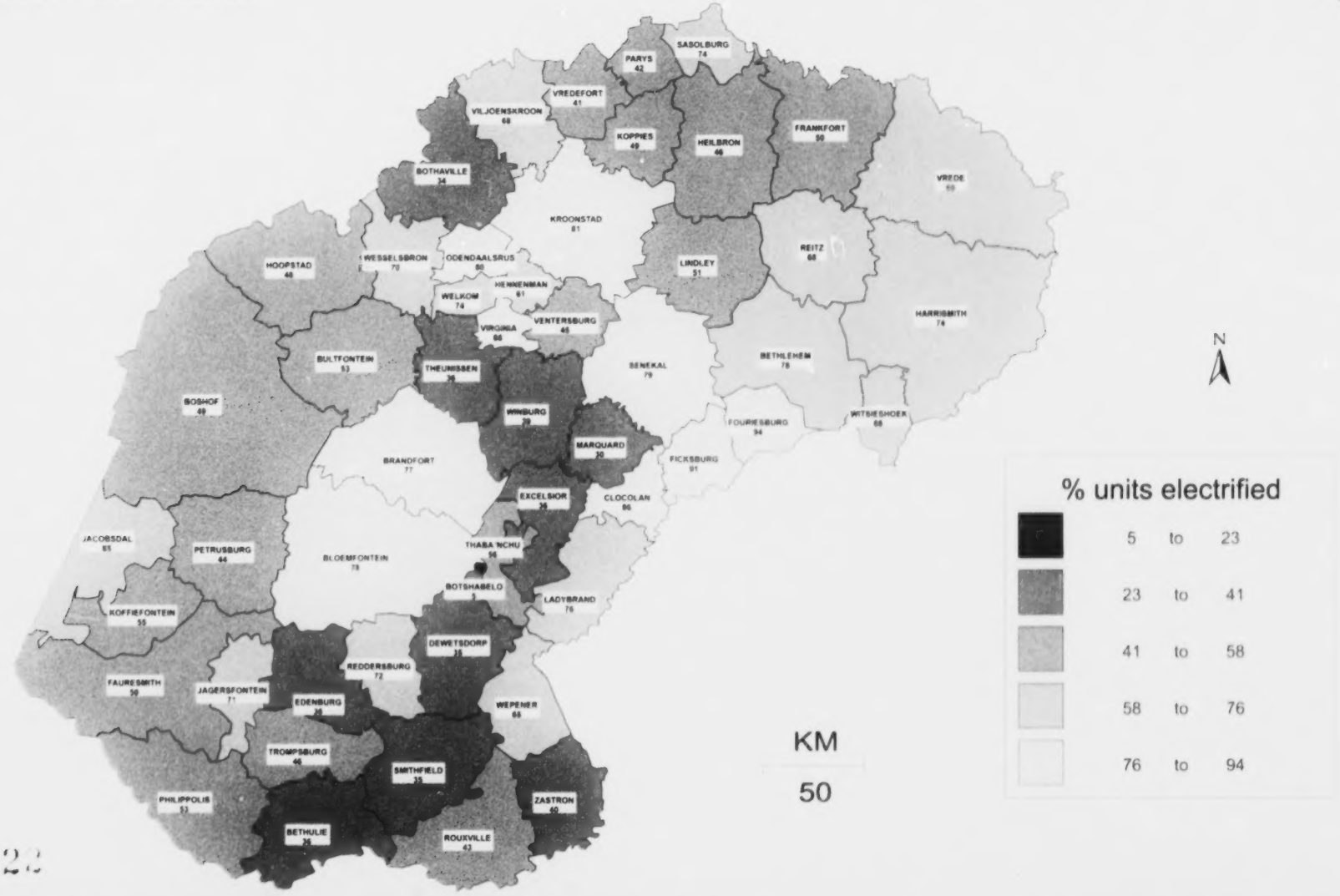
Human Sciences Research Council

# MAP 18 : PERCENTAGE FORMAL HOUSES ELECTRIFIED

Source : NELF Database

HSRC
RGN
GIS UNIT



## Table 18 Percentage formal houses electrified

| DISTRICT | TOTAL ELECTRIFIED FORMAL HOUSES | TOTAL FORMAL SERVICE POINTS | % ELECTRIFIED HOUSES |
|---|---|---|---|
| Bethlehem | 8 863 | 11 617 | 76 |
| Bethulie | 556 | 1 564 | 36 |
| Bloemfontein | 48 019 | 61 836 | 78 |
| Boshof | 1 710 | 3 505 | 49 |
| Bothaville | 2 173 | 6 343 | 34 |
| Botshabelo | 1 267 | 27 019 | 5 |
| Brandfort | 2 194 | 2 859 | 77 |
| Bultfontein | 1 377 | 2 597 | 53 |
| Clocolan | 1 413 | 1 642 | 86 |
| Dewetsdorp | 589 | 1 689 | 35 |
| Edenburg | 417 | 1 167 | 36 |
| Excelsior | 628 | 1 769 | 36 |
| Fauresmith | 579 | 1 166 | 50 |
| Ficksburg | 3 989 | 4 374 | 91 |
| Fouriesburg | 1 076 | 1 142 | 94 |
| Frankfort | 2 029 | 4 065 | 50 |
| Harrismith | 5 095 | 6 928 | 74 |
| Heilbron | 1 891 | 4 081 | 46 |
| Hennenman | 1 816 | 2 960 | 61 |
| Hoopstad | 1 154 | 2 422 | 48 |
| Jacobsdal | 930 | 1 422 | 65 |
| Jagersfontein | 347 | 486 | 71 |
| Koffiefontein | 1 007 | 1 818 | 55 |
| Koppies | 754 | 1 546 | 49 |
| Kroonstad | 14 514 | 17 814 | 81 |
| Ladybrand | 3 710 | 4 852 | 76 |
| Lindley | 1 950 | 3 858 | 51 |
| Marquard | 382 | 1 254 | 30 |
| Odendaalsrus | 8 494 | 10 556 | 80 |
| Parys | 4 308 | 10 199 | 42 |
| Petrusburg | 564 | 1 286 | 44 |
| Philippolis | 512 | 968 | 53 |
| Reddersburg | 598 | 834 | 72 |
| Reitz | 1 811 | 2 669 | 68 |
| Rouxville | 460 | 1 059 | 43 |
| Sasolburg | 17 612 | 23 778 | 74 |
| Senekal | 3 340 | 4 237 | 79 |
| Smithfield | 506 | 1 444 | 35 |
| Thaba 'Nchu | 1 193 | 2 149 | 56 |
| Theunissen | 1 117 | 3 071 | 36 |
| Trompsburg | 394 | 854 | 46 |
| Ventersburg | 501 | 1 125 | 45 |
| Viljoenskroon | 3 817 | 5 651 | 68 |
| Virginia | 9 276 | 10 542 | 88 |
| Vrede | 1 943 | 2 806 | 69 |
| Vredefort | 626 | 1 520 | 41 |
| Welkom | 28 682 | 38 559 | 74 |
| Wepener | 1 254 | 1 944 | 65 |
| Wesselsbron | 1 469 | 2 112 | 70 |
| Winburg | 653 | 1 668 | 39 |
| Witsieshoek | 6 085 | 9 208 | 66 |
| Zastron | 595 | 1 496 | 40 |

### 7.5.2 Electrification of informal housing

Witsieshoek (1%), Botshabelo (2%), Thaba 'Nchu (6%) and Jagersfontein (6%) have the lowest levels of electrified informal housing. Most of the districts fall into the second lowest range of between 16 to 32%. The two districts with the highest levels of provision are Welkom (78%) and Virginia (60%).

While the electrification of informal housing can be expected to be low owing to the apartheid policies of restricted urbanisation, it is of some concern that not all the main economic centres are on a par. Sasolburg (16%) is far below Kroonstad (35%), Welkom (78%), Bloemfontein (28%), Bethlehem (32%) and Harrismith (25%).

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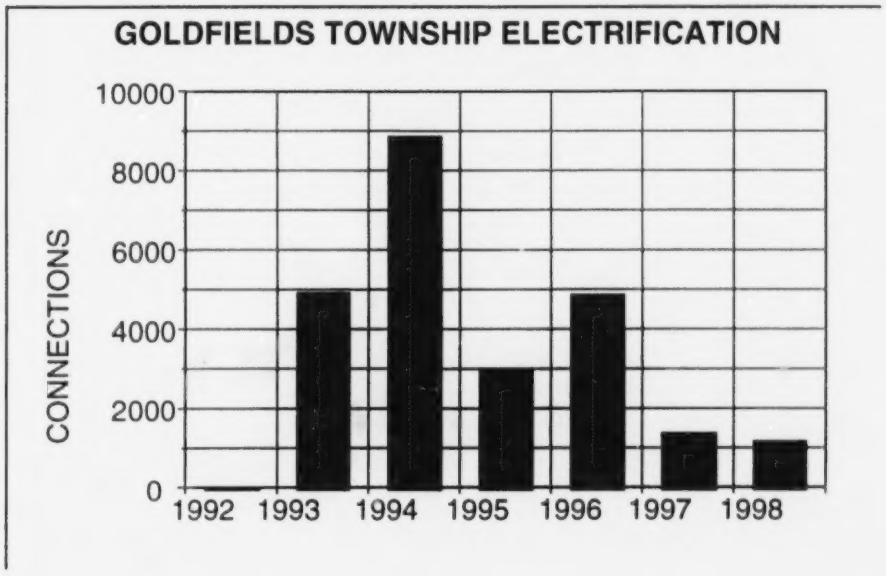
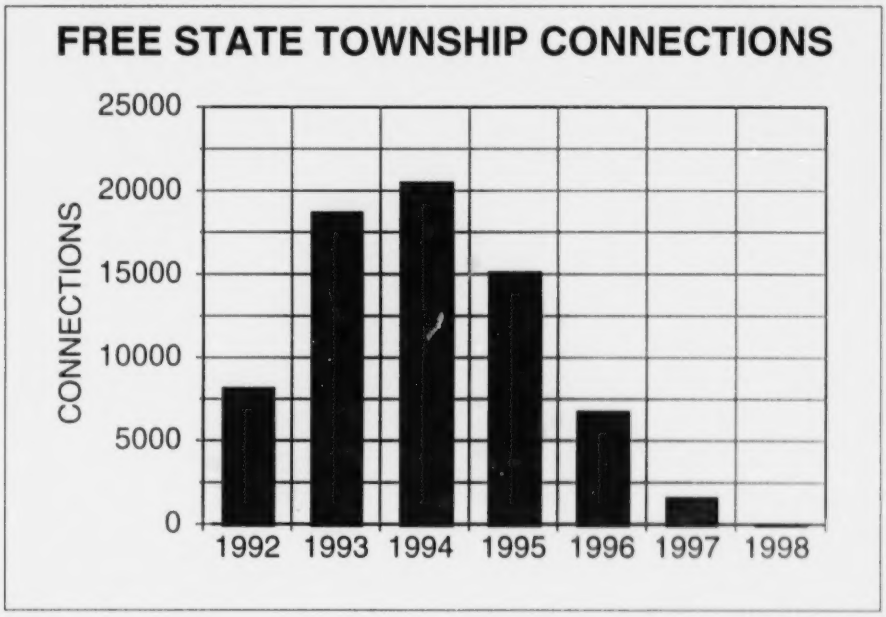
### Current township electrification programme

Regarding electricity supply, Eskom is trying to enhance accessibility to this service with the basic requirement of connecting 80% of customers in a township to the supply point. This programme is divided into two main regions: the Goldfields and the Free State. In the Goldfields nine black townships with a total of 26 179




proclaimed stands are scheduled to be 89,9% electrified by the end of 1998. As the above graph shows, in 1992 Eskom had no customers in these townships, but by 1993 and 1994 4 902 and 8 849 new connections respectively had been made. In 1995 new connections dropped to 2 976, but rose to 4 850 in 1996.

In the Free State 36 townships are being electrified. These had an existing customer base of 16 254 connections in 1992, as shown in the graph below. Electrification peaked in 1994 with 20 480 connections. Thereafter connections were scheduled to decline to 1 560 in 1997.




By 1997 on average these townships would be 95,5% electrified. The NELF data base lists Selosesha separately. It had 14 320 stands but no connections in 1992, but 5 406 and 6 800 connections were made in 1995 and 1996 respectively. Five hundred connections were scheduled for 1997, making this township 88,7% electrified. The electrification percentage is likely to fluctuate as housing delivery increases.

Since Eskom started its electrification drive, distribution equability is approaching alignment with population size for the Free State, except for Witsieshoek where Eskom is not involved in the distribution of electricity. Currently the Department of Works controls the distribution of electricity in this area. The cost of electrifying the Witsieshoek area will be high, approximately R4 000 per connection as opposed to the Eskom national norm of R2 500 per connection, because of inaccessibility, inadequate infrastructures, etc.

### Issues relevant to meeting service needs

Issues that have a negative impact on meeting the services needs of the people in the Free State are as follows:

- Low income levels
- High cost of electrifying rural areas
- Rate of consumption by the customer (± 80 kWh p/c average)
- Existing culture of non-payment

The following are needed in the future to meet the service demands of the province:

- Job creation
- Lower cost technology (cost savings)
- Further utilisation of electrical equipment (stoves, heaters)
- A culture of payment

## Comments on data

The Eskom data relating to connection figures (electrified dwellings) is seen as 100% accurate. Data capturing and representation can be improved through close liaison with Eskom on a national level where all the necessary data and reports regarding electrified dwellings are available. District-based analysis is a relevant way of representing electrification data.

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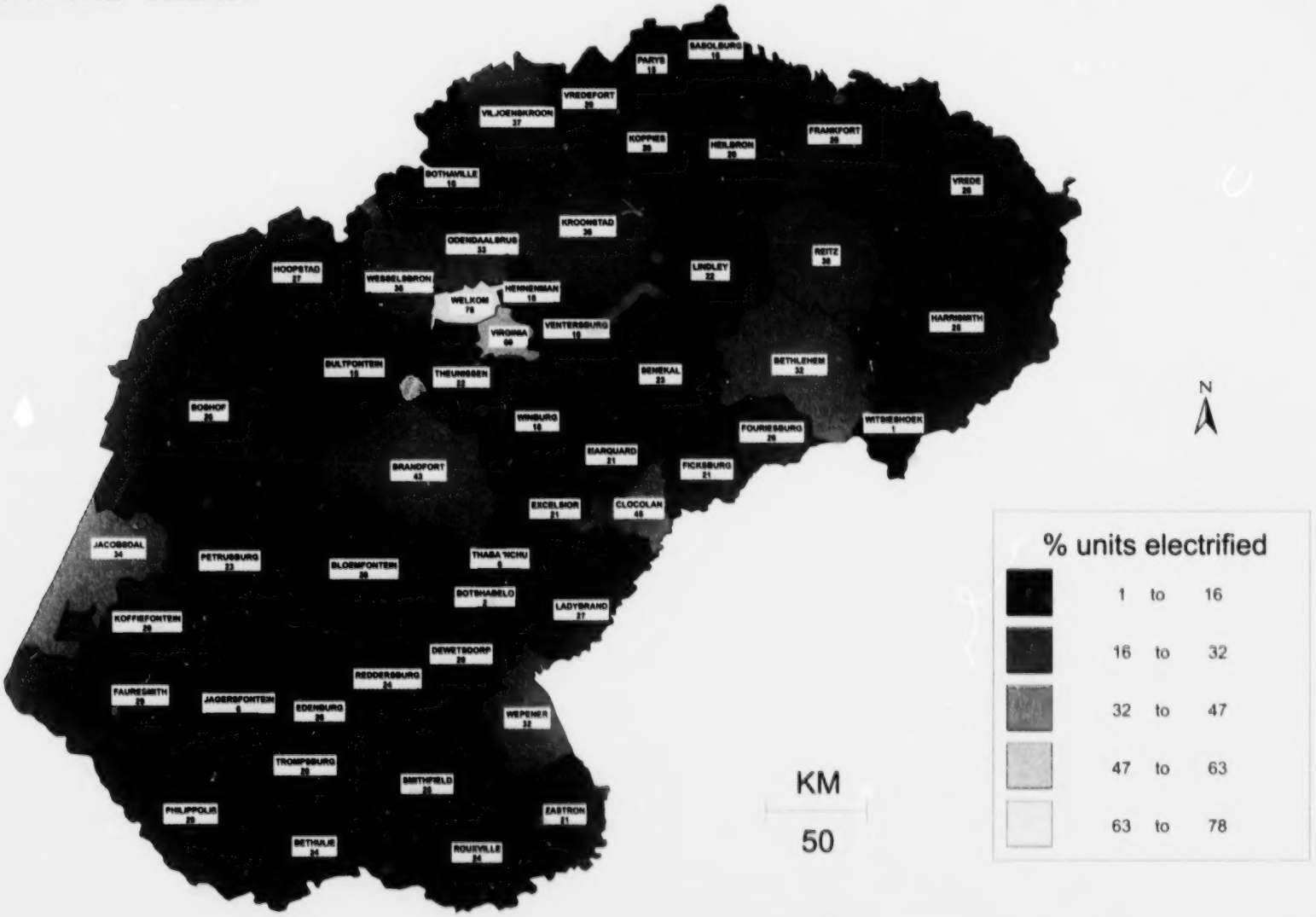
Eskom

# MAP 19 : PERCENTAGE INFORMAL HOUSES ELECTRIFIED

Source : NELF Database

HSRC
RGN
GIS UNIT





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## Table 19 Percentage informal houses electrified

| DISTRICT | TOTAL INFORMAL SERVICE POINTS | TOTAL ELECTRIFIED INFORMAL HOUSES | % ELECTRIFIED HOUSES |
|---|---|---|---|
| Bethlehem | 5 739 | 1 812 | 31,6 |
| Bethulie | 613 | 149 | 24,3 |
| Bloemfontein | 21 394 | 6 067 | 28,4 |
| Boshof | 3 037 | 800 | 26,3 |
| Bothaville | 4 723 | 735 | 15,6 |
| Botshabelo | 16 875 | 417 | 2,4 |
| Brandfort | 2 576 | 1 099 | 42,7 |
| Bultfontein | 3 078 | 451 | 14,7 |
| Clocolan | 2 460 | 1 108 | 45,0 |
| Dewetsdorp | 1 235 | 253 | 20,5 |
| Edenburg | 477 | 124 | 26,0 |
| Excelsior | 2 029 | 423 | 20,8 |
| Fauresmith | 1 057 | 310 | 29,3 |
| Ficksburg | 4 763 | 991 | 20,8 |
| Fouriesburg | 2 142 | 561 | 26,2 |
| Frankfort | 5 367 | 1 049 | 19,5 |
| Harrismith | 5 447 | 1 383 | 25,4 |
| Heilbron | 4 579 | 934 | 20,4 |
| Hennenman | 1 926 | 355 | 18,4 |
| Hoopstad | 2 703 | 730 | 27,0 |
| Jacobsdal | 966 | 330 | 34,2 |
| Jagersfontein | 1 096 | 66 | 6,0 |
| Koffiefontein | 432 | 85 | 19,7 |
| Koppies | 2 531 | 511 | 20,2 |
| Kroonstad | 7 927 | 2 835 | 35,8 |
| Ladybrand | 3 028 | 806 | 26,6 |
| Lindley | 3 930 | 847 | 21,6 |
| Marquard | 2 241 | 464 | 20,7 |
| Odendaalsrus | 10 421 | 3 412 | 32,7 |
| Parys | 3 060 | 449 | 14,7 |
| Petrusburg | 1 197 | 270 | 22,6 |
| Philippolis | 516 | 149 | 28,9 |
| Reddersburg | 499 | 121 | 24,2 |
| Reitz | 3 620 | 1 363 | 37,7 |
| Rouxville | 1 325 | 313 | 23,6 |
| Sasolburg | 3 342 | 544 | 16,3 |
| Senekal | 5 097 | 1 156 | 22,7 |
| Smithfield | 610 | 150 | 24,6 |
| Thaba 'Nchu | 12 231 | 784 | 6,4 |
| Theunissen | 3 306 | 733 | 22,2 |
| Trompsburg | 351 | 97 | 27,6 |
| Ventersburg | 1 968 | 202 | 10,3 |
| Viljoenskroon | 3 967 | 1 487 | 37,5 |
| Virginia | 3 055 | 1 840 | 60,2 |
| Vrede | 4 302 | 1 101 | 25,6 |
| Vredefort | 1 437 | 288 | 20,0 |
| Welkom | 4 487 | 3 496 | 77,9 |
| Wepener | 1 170 | 373 | 31,9 |
| Wesselsbron | 3 521 | 1 232 | 35,0 |
| Winburg | 2 027 | 355 | 17,5 |
| Witsieshoek | 39 538 | 580 | 1,5 |
| Zastron | 1 654 | 349 | 21,1 |

## 7.6 Roads

### Introduction

"Like so much else in our country, South Africa's road infrastructure is an amalgam of both First World and Third World standards. The national and main road structures have played a very significant part in the economic development of the country over the last 40 years and are destined to play an even more important part in the future. At the same time there are large sectors of the rural community that are inadequately served by roads. This is a situation which must be addressed as a matter of urgency if we are to achieve the planned levels of social and economic development" (A Future for Roads in South Africa, 1996:1).

South Africa's roads carry between 80% and 90% of all passenger and freight movements in the country. Despite their critical function there is a serious lack of funds for their maintenance and development.

### Role of roads in development

"A good road (transport) system has been identified as the second most important catalyst in a country's social and economic development (after education). A former administrator of the USA Federal Highway Administration stated: 'It was not our wealth which made our good roads possible, but rather our good roads which made our wealth possible.' This is an important message for South Africa which underlines the need for urgent and determined actions to be taken to preserve and, where necessary, improve our road network in the interests of social and economic development in South Africa" (A Future for Roads in South Africa, 1996:3).

Transport, especially road transport, is central to development. Therefore, without physical access to jobs, health, education and other amenities quality of life suffers. Without physical access to resources and markets, growth stagnates and poverty reduction cannot be sustained.

"An adequate road system plays a major role in the economic and societal health of a country. Therefore, such a road system should receive an appropriate and stable level of investment in order to establish and maintain the system. Also it should be effectively and efficiently managed to obtain the maximum return on scarce financial and physical resources" (A Future for Roads in South Africa, 1996:3).

### Road network classification

"Roads and streets constitute the necessary communication links which provide adequate support for economic growth and which must satisfy the basic accessibility needs, i.e. the ability to be reached, and conversely, the basic mobility needs i.e. the ability to move, or be moved, easily, quickly and efficiently, of the population" (A Future for Roads in South Africa, 1996:7).

It is important to determine a suitable and encompassing classification for roads. Such an approach would classify roads by recognising the authorities primarily responsible for their provision, as well as the functionality of the different elements of the total network.

The classification is as follows:

- **National roads**

"The authority primarily responsible is the South African Roads Board. These roads provide mobility in a national context. Traffic on these roads is usually associated with longer travel distances and the design of the roads should make provision for relatively high speeds, and interference with through traffic should be minimised. These roads are provided primarily for economic reasons. They are regarded as strategic economic assets vital to the ability of the country to support and improve economic growth through industrial development and exports" (A Future for Roads in South Africa, 1996:7).

- **Provincial roads**

"The authorities primarily responsible are the provincial Departments of Transport and in some cases Public Works. Provincial roads are primarily provided for access and mobility in a regional context. These roads are designed for shorter travel distances and moderate speeds. Such roads usually form the links between towns not situated on the national road network" (A Future for Roads in South Africa, 1996:7).

- **Urban roads**

The authorities primarily responsible are city or local authorities. Urban roads are provided for mobility in urban areas.

"Although the provision of urban streets and roads is generally financed through local rates and taxes, the national and provincial road authorities do accept responsibility for certain national and provincial roads in urban and metropolitan areas to ensure route continuity. The Johannesburg outer ring road is such an example" (A Future for Roads in South Africa, 1996:9).

### Classifying roads according to road user needs

"Roads satisfy various needs of the road user such as, for example, enhanced mobility. This they will do to a greater or lesser extent depending on their level of serviceability, which provides benefits of comfort, convenience, speed, safety and economy of travel. Many of the maintenance and upgrading activities performed within the roads budget are aimed at increasing serviceability. By far the greater part of the benefits that they produce will accrue exclusively to the road using public. Accordingly, it must be questioned whether the general taxpaying public should be required to pay for such improvements from the State Revenue Fund" (A Future for Roads in South Africa, 1996:22).

Other needs, *inter alia*, include, firstly, that like other forms of government activity in a market-oriented mixed economy such as South Africa's, roads must be economically efficient. This requires that the scarce resources available for roads must be allocated to satisfy the greatest demands. This requires road provision to be sensitive to market signals.

"Road provision must also be equitable. There are a number of facets to this requirement. It may be more expensive to build and maintain roads under particular climatic or topographical conditions than others, so that regions exhibiting difficult conditions may warrant subsidisation by others more fortunately placed. Economically disadvantaged regions of the country may need to receive special

development efforts. Furthermore, a balance must be maintained between the provision of roads and the supply of public transport. This is so that the disadvantages experienced by social groups without regular access to private motor vehicles are not exacerbated" (A Future for Roads in South Africa, 1996:22).

Finally, road provision must satisfy certain strategic requirements, for example, access to certain development regions must be secured, and the quality of life in rural areas improved in order to prevent their depopulation.

There is a trade off between these goals, and different groups within society at large may be held responsible for providing the funds needed for their satisfaction.

"In particular, the user pays approach to funding is appropriate to the goals of economic efficiency and increased serviceability required by the higher order roads, such as the national road network. By contrast, the goal of equity and provision of basic access implies that some users at least are not able to pay. Funding out of general tax revenue is thus required to satisfy this goal, as well as that of meeting strategic objectives where the road using public is not the beneficiary. Finally, user charging might need to be combined with subsidisation out of general revenue in order to satisfy the goal of environmental compatibility" (A Future for Roads in South Africa, 1996:22).

Road funding is a heterogeneous activity. Different road maintenance and improvement activities will satisfy different needs, and only in some cases will significant advantages accrue to the public at large. In other cases, benefits are experienced exclusively by road users, and can and should be "sold" to them like any other commodity.

### Policy implications

The road network in South Africa faces a crisis. For many years now financial allocations from the Exchequer have been inadequate to meet the recurring needs of necessary maintenance, let alone provide much-needed rehabilitation, improvement and expansion of the network to cater for the rapidly growing demands on the network.

"The main provisions to address the undesirable situation in respect of the road network are institutional and financial. They relate to the institutional framework within which the national road network is managed; an inadequate flow of funds; inadequate conditions of employment to attract sufficient numbers of experienced road engineers and technicians; lack of clearly defined responsibilities; inadequate management systems; and a lack of managerial authority and accountability. Roads are managed like a bureaucracy, not a business. Managers simply do not have the funds or incentives to use resources efficiently - nor are they penalised for poor performance" (A Future for Roads in South Africa, 1996:33).

Solving these problems requires fundamental changes in the way governments manage, and especially finance their networks, particularly the national networks that are provided primarily for economic reasons.

"The key concept for this level of roads which is emerging in many countries throughout the world is commercialisation, that is bringing the higher order roads into

the market place, putting them on a fee-for-service basis and managing them like any other business enterprise. However, since roads are a public monopoly, and likely to remain in government hands, commercialisation requires complementary reforms in other areas" (A Future for Roads in South Africa, 1996:33).

Such reforms include:

- involving the road user in the management of roads to win public support for more road funding, to control potential monopoly power and to constrain road funding to what is affordable;
- establishing a clear organisational structure to place the delivery of the national road programme outside the hands of the bureaucracy;
- securing an adequate and stable flow of funds and introducing secure arrangements to channel these funds to the road agency, and
- strengthening the management of roads by providing effective systems and procedures and strengthening managerial accountability.

"There is a strong case for the re-introduction of a dedicated fund for the national road system. The income to the fund needs to be generated by a levy on fuel and also loan funds, redeemed by road tolls. For the provincial and urban roads, where a significant increase in funding levels is also urgent, it appears appropriate that the financial sources should comprise vehicle licenses (greatly increased in magnitude) and annual appropriations from the Exchequer" (A Future for Roads in South Africa, 1996:33).

### 7.6.1 Access to road infrastructure

The provision of a comprehensive road network is an indicator for the future development of areas that need access to nearby markets.

The Free State is divided into twenty road districts that usually consist of two or more magisterial districts whose boundaries often do not coincide with that of the road districts. The map indicates that much of the southern Free State has a low ratio of road length per square kilometre. Other areas with a low ratio of road length per square kilometre are Witsieshoek in the east and Hoopstad and Boshof in the west. Districts with greater ratios of road length per square kilometre correspond to the more industrialised centres around Bloemfontein, Welkom, Sasolburg and a cluster of districts on the border with Lesotho. Most of the northern and eastern Free State has an average level of provision.

The Free State roads are classified according to a hierarchical system based on certain attributes, namely

| | |
|---|---|
| N - roads | National roads |
| P - roads | Primary routes that are usually subclassified hierarchically from T1 to T3 according to their importance |
| S - roads | Secondary roads that are normally subclassified hierarchically from T4 to G3 depending on their importance |
| T - roads | Tertiary roads that are classified G4 and are usually only access roads to farms |

The road network of the Free State is generally widespread across the whole province, and the classification of the road and its condition is directly related to economic activity. Road users prefer a network that will allow them access to all necessary

facilities without their having to travel further than five kilometres. Expansion and upgrading of the existing road network is necessary on a five to seven-year cycle in order to meet the escalating demand on the network.

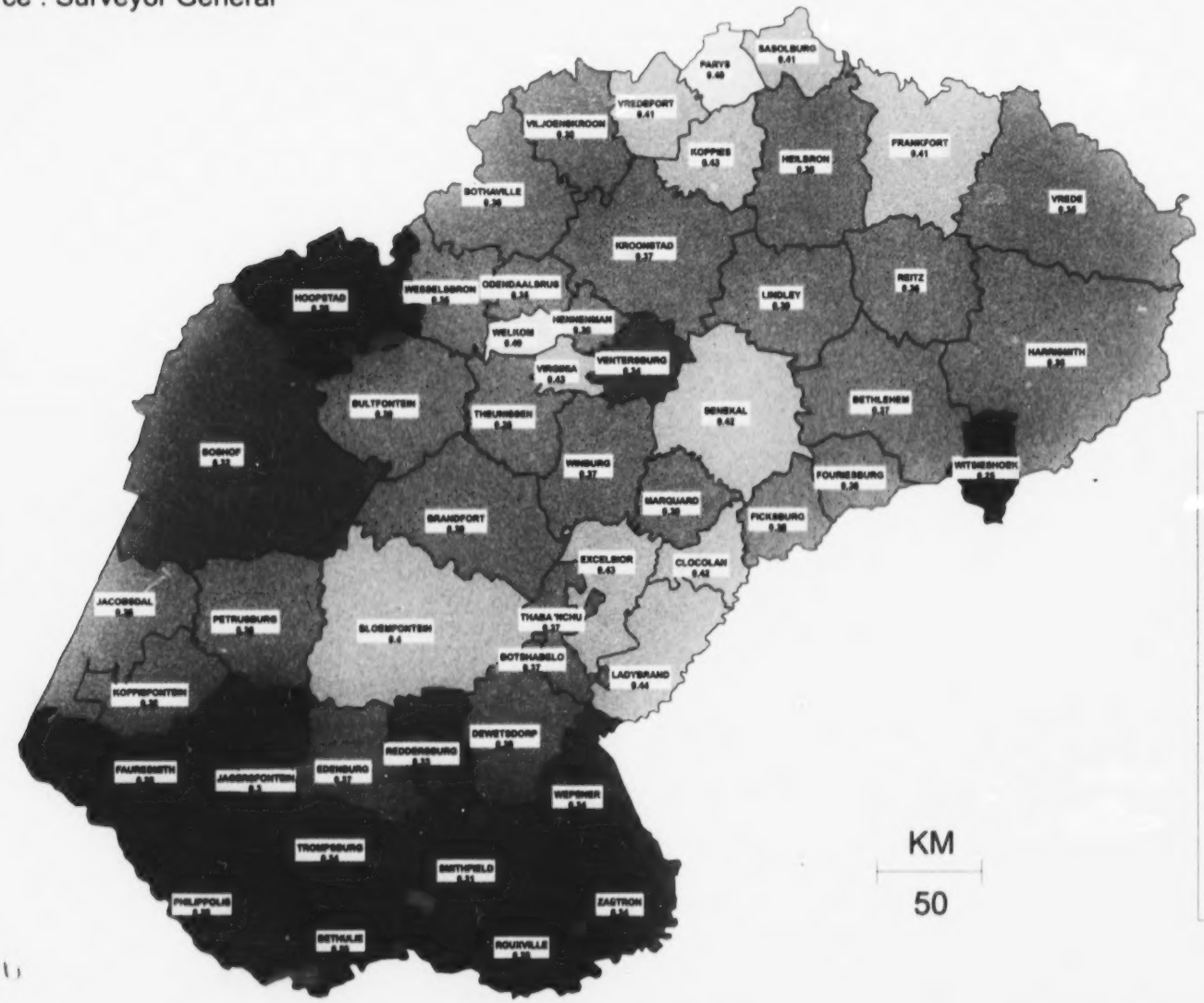
The Free State province is already using alternative methods of construction to maintain existing roads and create new branches to the road network at affordable levels. Each local office maintains a team of workers for this purpose. It will soon be necessary to double the road network to accommodate the large increase in road users.

J.W. Pretorius
Department of Roads

# MAP 20 : LENGTH OF ROADS PER SQUARE KILOMETRE

Source : Surveyor General

HSRC
RGN
GIS UNIT



## Table 20 Length of roads per square kilometre

| DISTRICT | LENGTH OF ROADS (KM) | AREA (KM²) | LENGTH PER KM² |
|---|---|---|---|
| Bethlehem | 1 369 | 3 671 | 0,37 |
| Bethulie | 735 | 2 600 | 0,28 |
| Bloemfontein | 2 266 | 5 649 | 0,40 |
| Boshof | 3 027 | 9 431 | 0,32 |
| Bothaville | 1 039 | 2 859 | 0,36 |
| Botshabelo | 8 | 22 | 0,37 |
| Brandfort | 1 490 | 3 851 | 0,39 |
| Bultfontein | 1 241 | 3 158 | 0,39 |
| Clocolan | 444 | 1 058 | 0,42 |
| Dewetsdorp | 957 | 2 502 | 0,38 |
| Edenburg | 768 | 2 058 | 0,37 |
| Excelsior | 798 | 1 878 | 0,43 |
| Fauresmith | 1 391 | 4 962 | 0,28 |
| Ficksburg | 491 | 1 304 | 0,38 |
| Fouriesburg | 427 | 1 180 | 0,36 |
| Frankfort | 1 407 | 3 445 | 0,41 |
| Harrismith | 2 460 | 6 927 | 0,36 |
| Heilbron | 1 295 | 3 608 | 0,36 |
| Hennenman | 225 | 593 | 0,38 |
| Hoopstad | 991 | 3 594 | 0,28 |
| Jacobsdal | 933 | 2 569 | 0,36 |
| Jagersfontein | 374 | 1 234 | 0,30 |
| Koffiefontein | 682 | 1 905 | 0,36 |
| Koppies | 663 | 1 559 | 0,43 |
| Kroonstad | 1 567 | 4 254 | 0,37 |
| Ladybrand | 956 | 2 182 | 0,44 |
| Lindley | 1 114 | 2 841 | 0,39 |
| Marquard | 521 | 1 342 | 0,39 |
| Odendaalsrus | 308 | 872 | 0,35 |
| Parys | 451 | 926 | 0,49 |
| Petrusburg | 1 110 | 2 958 | 0,38 |
| Philippolis | 957 | 3 451 | 0,28 |
| Reddersburg | 503 | 1 532 | 0,33 |
| Reitz | 966 | 2 720 | 0,36 |
| Rouxville | 772 | 2 791 | 0,28 |
| Sasolburg | 423 | 1 038 | 0,41 |
| Senekal | 1 509 | 3 619 | 0,42 |
| Smithfield | 894 | 2 861 | 0,31 |
| Thaba 'Nchu | 431 | 1 155 | 0,37 |
| Theunissen | 716 | 1 881 | 0,38 |
| Trompsburg | 666 | 1 936 | 0,34 |
| Ventersburg | 419 | 1 246 | 0,34 |
| Viljoenskroon | 816 | 2 121 | 0,38 |
| Virginia | 242 | 561 | 0,43 |
| Vrede | 1 905 | 5 485 | 0,35 |
| Vredefort | 575 | 1 392 | 0,41 |
| Welkom | 280 | 574 | 0,49 |
| Wepener | 604 | 1 756 | 0,34 |
| Wesselsbron | 618 | 1 743 | 0,35 |
| Winburg | 897 | 2 450 | 0,37 |
| Witsieshoek | 258 | 1 047 | 0,25 |
| Zastron | 644 | 1 921 | 0,34 |

## 7.7 Telecommunications

### Introduction

The first section dealing with the government's vision, the RDP, economic growth and empowerment, and economic empowerment of historically disadvantaged South Africans has been abridged from the second draft of the White Paper on Telecommunications Policy 1996.

### The state's vision for the telecommunications sector

The state recognises the central importance of access to telecommunications to the achievement of its economic and social goals. Affordable communications for all, citizens and business alike, throughout South Africa, is at the core of its vision and is the goal of its policy.

The challenge is to articulate a vision that balances the provision of a basic universal service to disadvantaged rural and urban communities with the delivery of high-level services capable of meeting the needs of a growing South African economy.

The vision must therefore reconcile these two seeming opposites within an integrating framework that also allows for a dynamic definition of universal service and facilitates the co-ordination of all available infrastructure in support of its goal.

### The RDP

"The telecommunications sector is key to the success of the RDP. Access to communications facilities is not only necessary for the delivery of services in critical sectors such as education and health; it also serves to stimulate the creation of small business and offers a channel of communication to reinforce participation in democratic processes at community, provincial and national levels. It is the essential backbone for development and offers the only opportunity for leapfrogging its relatively slow sequential phases" (White Paper, 1996:17).

### Economic growth and empowerment

The telecommunications sector is both a source of economic growth and an enabler of growth in other sectors.

As a source of economic growth the sector itself offers opportunities for locally developed innovative products and services which, with appropriate transfers of skills and technologies, can contribute significantly to economic empowerment of previously disadvantaged communities. The sector can make an important contribution to export growth and import substitution.

As an enabler of growth the sector forms part of the basic infrastructure needed to stimulate economic activity including the creation and development of business in all sectors and therefore the growth of the economy as a whole. An integrated high-quality network providing value-added services and access to the international information highway is required to support the needs of South Africa's internationally competitive industries and link its economy into the global system. Improved communication with the African region will reinforce South Africa's presence by

facilitating exchanges among institutions in the public and private sectors and by providing opportunities for technology exports.

Because of the fundamental importance of the telecommunications sector to national economic growth and development, planning for the sector should be closely integrated into broad economic, trade and social planning and effectively linked with other information policy initiatives.

### Economic empowerment of historically disadvantaged South Africans

"Political empowerment of the majority through democratic processes underway in the country must be accompanied by economic empowerment in order to achieve the national goal of sustainable social and economic development. The creation of meaningful jobs, wealth and a decent standard of living for the population will give meaning to their right to vote. Thus, political power cannot bring stability and growth without addressing the issue of historical disparities within the economic power. Besides referring to those who were disadvantaged by the apartheid system in the past, the term 'disadvantaged' also applies to those South Africans who have been historically disadvantaged through discrimination on the grounds of gender and/or disability. In the context of telecommunications the severe disadvantage experienced by members of rural communities under apartheid should receive special attention" (White Paper, 1996:40).

"Economic empowerment of historically disadvantaged communities is a deliberate programme of achieving meaningful participation by all members of these communities in all aspects of productive economic activities in South Africa as consumers, workers, managers and owners. Achievement of sustainable economic empowerment for historically disadvantaged communities will require a deliberate long-term phased programme utilising a wide spectrum of approaches. These will include the extension of telecommunications services to all; broadening the equity ownership of current and future enterprises (subject to the state assets debate); creating opportunities for meaningful employment and management; and the effective promotion of entrepreneurship. The effectiveness of any of these aspects and the success of the overall programme of economic empowerment will be rooted in the principle of a broad-based and non-discriminatory involvement of all communities in the economic development of South Africa. Human resource development within the telecommunications sector also needs to be seen as a form of economic empowerment to enable disadvantaged South Africans to participate in the industry effectively" (White Paper, 1996:40).

### 7.7.1 Residential line shares

The data relating to the Free State were analysed in terms of residential line supply only. During the time of writing Telkom were sensitive about the public release of actual numbers of residential lines per magisterial district. This was due to uncertainty regarding the future restructuring of Telkom and the possible utilisation of data by competitors. The 1996 Census will however place this data in the public domain.

To accommodate Telkom's sensitivities residential line data were transformed to indicate the priority of the various districts. Very high priority districts are those districts that are currently well below the provincial average. The other priority ranges

are high, medium, low and very low. The very low priority districts have a residential line penetration that is much greater than the provincial average.

According to the map the highest priority district is Witsieshoek. The other district that was not part of the former Orange Free State is Thaba 'Nchu, formerly part of Bophuthatswana. Thaba 'Nchu also falls into the high priority category. Adjacent to Thaba 'Nchu is Botshabelo, a predominantly black area that was part of the former Orange Free State. Botshabelo also has a very high score and is second only to Witsieshoek in priority ranking. While the legacy of apartheid leads one to expect the predominately black areas to be underserviced, it should be noted that many districts from the former Orange Free State are also very high priority districts. Vredefort and Koppies are two adjacent high priority areas surrounded by low to medium priority districts, such as Sasolburg to the north and Kroonstad in the south.

In general the northern and eastern Free State has medium to low priorities except for Witsieshoek, Fouriesburg, Koppies and Vredefort. The central and southern Free State is characterised by a cluster of very low and low priority districts centred around Bloemfontein. Around this low to very low priority cluster is a nearly complete circle of high to very high priority districts. The very low priority areas are the main industrial and financial centres of the province.

If the telecommunications sector is to be both a growth sector in itself and a means by which other sectors can develop, then a long-term strategy concomitantly to supply universal access to historically disadvantaged rural and urban communities and also to form part of the infrastructure vital to a developing economy is required. Telkom's Vision 2000 strategy hopes to increase the number of subscribers by 2-3 million. This will only be possible if a strategic equity partner (SEP) is found for Telkom. This will allow the rate at which new services are provided to treble. The South African government is Telkom's main shareholder and will have overseen the appointment of an SEP perhaps by March, 1997.

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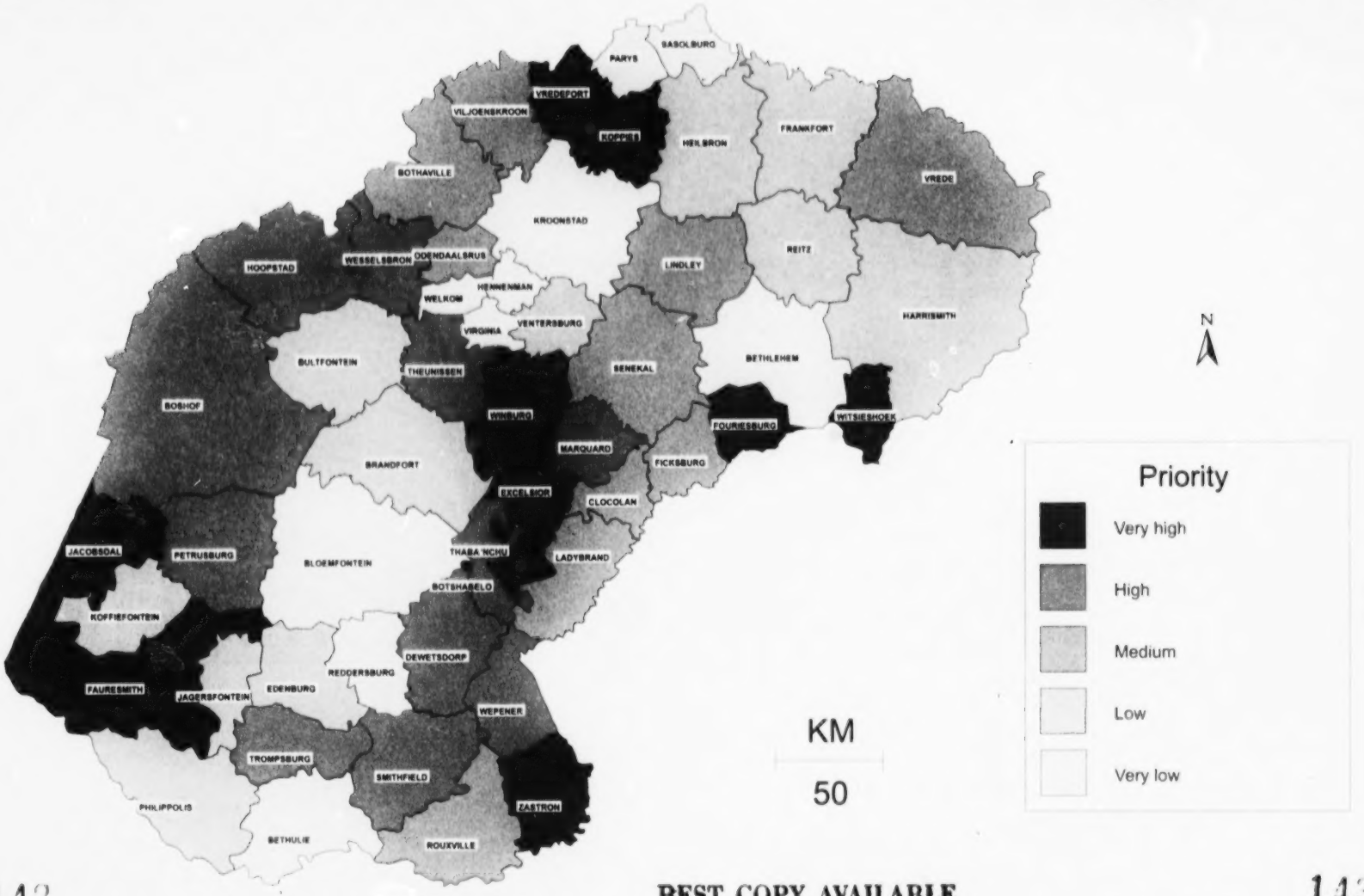
GIS Unit
Human Sciences Research Council

# MAP 21 : TELECOMMUNICATIONS PRIORITIES

Source : Telkom 1995

HSRC
RGN
GIS UNIT



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## Table 21 Telecommunications priorities

| DISTRICT | PRIORITY | RANK |
|---|---|---|
| Witsieshoek | Very high | 1 |
| Botshabelo | Very high | 2 |
| Jacobsdal | Very high | 3 |
| Fauresmith | Very high | 4 |
| Fouriesburg | Very high | 5 |
| Winburg | Very high | 6 |
| Excelsior | Very high | 7 |
| Vredefort | Very high | 8 |
| Koppies | Very high | 9 |
| Zastron | Very high | 10 |
| Marquard | High | 11 |
| Wesselsbron | High | 12 |
| Theunissen | High | 13 |
| Hoopstad | High | 14 |
| Smithfield | High | 15 |
| Dewetsdorp | High | 16 |
| Petrusburg | High | 17 |
| Wepener | High | 18 |
| Thaba 'Nchu | High | 19 |
| Boshof | High | 20 |
| Trompsburg | High | 21 |
| Lindley | High | 22 |
| Clocolan | Medium | 23 |
| Odendaalsrus | Medium | 24 |
| Viljoenskroon | Medium | 25 |
| Ladybrand | Medium | 26 |
| Ficksburg | Medium | 27 |
| Rouxville | Medium | 28 |
| Senekal | Medium | 29 |
| Vrede | Medium | 30 |
| Bothaville | Medium | 31 |
| Ventersburg | Medium | 32 |
| Bultfontein | Low | 33 |
| Heilbron | Low | 34 |
| Jagersfontein | Low | 35 |
| Edenburg | Low | 36 |
| Harrismith | Low | 37 |
| Brandfort | Low | 38 |
| Reitz | Low | 39 |
| Philippolis | Low | 40 |
| Koffiefontein | Low | 41 |
| Frankfort | Low | 42 |
| Reddersburg | Very low | 43 |
| Virginia | Very low | 44 |
| Parys | Very low | 45 |
| Kroonstad | Very low | 46 |
| Hennenman | Very low | 47 |
| Bethlehem | Very low | 48 |
| Sasolburg | Very low | 49 |
| Bethulie | Very low | 50 |
| Welkom | Very low | 51 |
| Bloemfontein | Very low | 52 |

## 7.8 Postal services

### The company

"The South African Post Office is an independent public company, fully complying with the regulations laid down in the Companies Act. The State is the sole shareholder. Parliamentary control has been replaced by a Board of Directors, consisting of respected business and community leaders from outside the company, and a Management Board, headed by a Managing Director. The Post Office aims at profit-making. Financial accounts and statements are compiled in terms of the Companies Act; taxes are paid on any profits and the current shortfall is subsidised by the State" (SA Post Office, 1995:4).

### Main activities

"The Post Office is responsible for the handling and delivery of an average of 7,7 million mail items each working day; counter services at more than 1 600 post offices countrywide; and the Post Office Savings Bank, now known as the Postbank" (SA Post Office, 1995:4).

The Post Office also acts as an agent for a number of private and public organisations such as Telkom SA for the collection of telephone account payments and the SABC for the collection of television licence fees. Similarly, the paying of pensions, the selling of scratch cards, and the collecting of water and electricity account payments for certain municipalities, as well as the selling of revenue stamps are handled by the Post Office (SA Post Office, 1995:4).

### Reshaping the postal services

In 1993, the Post Office embarked on a programme to streamline the postal business to ensure a quicker, more effective service that puts clients first. This entailed the following:

- **Placing basic postal services within easy reach**

Since May 1993, postage stamps have been available at certain local bookshops, supermarkets, chemists, cafe's, spaza shops and filling stations. One-stop shopping was introduced by selling postage-paid envelopes, easy-to-use packaging and other articles needed to facilitate the mail service for clients. A larger variety of such services and products was introduced with the opening of postal shops in 1994/95. A single-queue system has been introduced at most of the major post offices to enable clients to do all their postal business, including banking business, at the same counter (SA Post Office, 1995:4).

- **Creating an infrastructure to suit the entire community**

It is Post Office policy to take the post office to the clients. For this reason, more post offices will open in shopping centres and inside existing host undertakings. This makes it easier for clients to do their postal business together with other business, even if it is during extended office hours. The first retail postal agencies were to be introduced in 1994/95 (SA Post Office, 1995:4).

- **Giving each person a postal address**

"A massive three million additional postboxes, mainly in the form of transportable mail collection units or postbox lobbies, are to be placed all over South Africa within the next five years to enable each household to receive mail. The focus will be on underdeveloped areas where no postal delivery service exists. This entails clients' collecting their own mail at postbox lobbies placed at convenient places after negotiation with communities. The other mail delivery options available include private postboxes, fixed poste restante (transportable postbox lobbies) and street delivery" (SA Post Office, 1995:5).

- **Delivering mail according to set standards**

"In April 1993, the Post Office introduced set mail delivery times. This entails delivery within two days in the same town or city, four days between towns and cities in the same province and between major centres in different provinces and five days to more remote places for inland standard economy mail. An additional day should be allowed for non-standardised and insured/registered or COD items. The day on which the letter is posted should not be taken into account. The Post Office's performance is measured against these set standards by external auditors and the Post Office is held publicly accountable to its clients" (SA Post Office, 1995:5).

- **Creating a computer network to facilitate counter services**

In 1994 the Post Office started to expand its computer network to link 5 000 counter service points countrywide. The system, known as Excellpos, will reduce paperwork to a minimum, expedite service at the counter and cut the waiting time in queues considerably (SA Post Office, 1995).

## Inland mail service

Three mail services are available: Economy Mail, Fastmail and Speed Services.

### Economy Mail

Economy Mail is the ordinary mail service in South Africa. The new standard postage stamp without face value may be used on all inland standard letters. Should it be used on non-standard items and overseas mail, additional postage stamps must be affixed (SA Post Office, 1995).

### Fastmail

Fastmail undertakes to deliver items at least one day earlier than Economy Mail in terms of the set delivery times. Fastmail comprises any standardised or non-standardised letter to a maximum of two kilograms, which must be handed in at a post office counter. Clients may use the Fastmail envelopes on sale at post offices or use their own envelopes. Stickers have been specially designed to ensure the item receives priority treatment throughout the mail handling process (SA Post Office, 1995:5).

### Speed Services

An extension of the priority mail service, Speed Services provides the following options to get urgent mail items to their destinations within the shortest possible time:

- Same-day delivery
- Overnight delivery

- International speed delivery

To make it even more convenient, clients may choose from

- counter-to-counter delivery,
- counter-to-door delivery,
- door-to-counter delivery,
- door-to-door delivery.

Speed Services guarantees delivery times and will compensate losses. Speed Services is also able to trace mail items at any given time (SA Post Office, 1995).

### 7.8.1 Access to postal services

The map shows that the existing network of post offices and postal agencies does not reflect the population distribution in the Free State province. In general, there is an overservicing in developed communities and the services in underdeveloped and disadvantaged communities are totally inadequate. A major effort is therefore required to render services in disadvantaged communities. This will be done in co-operation with private enterprises and host businesses to establish conventional post offices, retail post offices or retail postal agencies in their buildings.

A retail post office, also known as a postpoint, is a new concept offering the full range of services rendered by a post office, the only difference being that a retail post office is accommodated in a host business, for example a supermarket, chemist, etc., and is open for business during the business hours of the host. One-stop shopping is therefore enhanced.

A retail postal agency is a facility which renders limited basic facilities, for example mail handling, sale of postage stamps, collection of money in respect of certain services (telephone accounts, C.O.D. charges, savings bank deposits, etc.) Retail postal agencies are normally established in a business where the owner is appointed as the agent and for which an allowance is paid.

#### Strategy and objectives

The Post Office's main strategy and objectives are to

- create a new cost-effective retail network by obtaining a balance between the old company-owned conventional-type post offices and retail postal agencies.

  A cost-effective retail network can generally be described as facilities provided for the convenience of society which maintain a balance between service provision and related costs, to ensure a breakeven situation. To illustrate the point, a small community with little economic activity cannot expect to have a post office which would be run at a loss, hence an alternative such as a postal agency is the solution.

  Furthermore, with many smaller post offices running at a loss and with the government subsidy being phased out, it has become necessary to take stock of the entire infrastructure and phase out uneconomic post offices by closure, combination or reduction of status to that of postal agencies. The right balance

simply means that whatever facility is established must be financially self-sufficient, that is income must be able to sustain overheads.

- put basic services within the reach of all clients;
- minimise operational costs; and
- establish suitable retail networks for small, medium and large community markets.

A community market is an area that would benefit from post office facilities, either in the form of a post office or an agency, depending on the size and economic livelihood of such a market. There are no specific criteria regarding suitable retail networks for small, medium and large community markets. However, the ultimate objective is that the facility must generate sufficient income to take care of its overheads as in other normal business practices.

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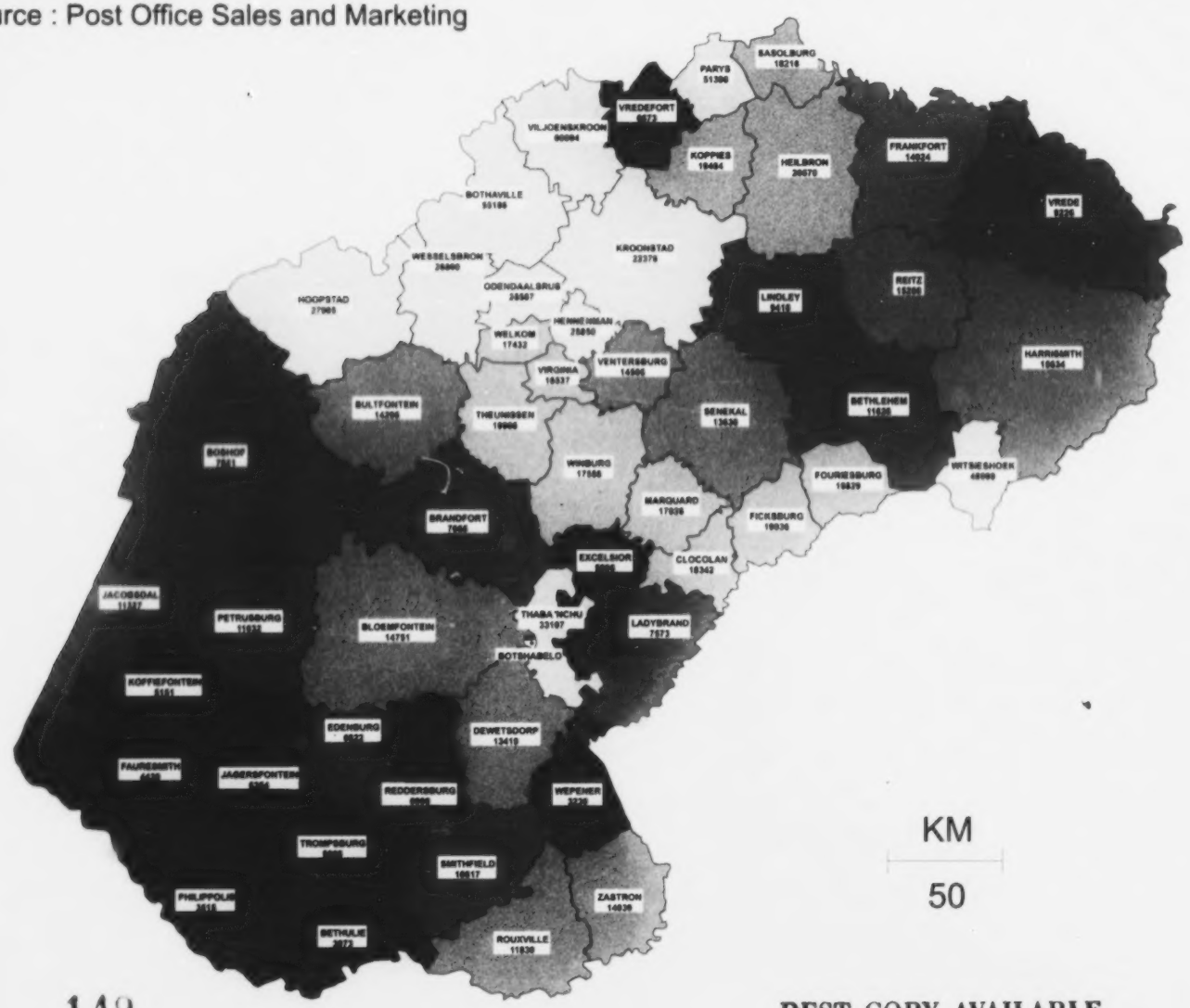
South African Post Office Limited

# MAP 22 : POPULATION PER POST OFFICE AND POSTAL AGENCY

Source : Post Office Sales and Marketing

HSRC
RGN
GIS UNIT




N

KM

50

## Population per post office

| | | | |
|---|---|---|---|
| 3 073 | to | 6 673 |
| 6 673 | to | 11 628 |
| 11 628 | to | 15 634 |
| 15 634 | to | 20 570 |
| 20 570 | to | 60 094 |



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## Table 22 Population per post office and postal agency

| DISTRICT | TOTAL POPULATION | POSTAL OFFICES AND POSTAL AGENCIES | TOT. POP. PER POSTAL FACILITY |
|---|---|---|---|
| Bethlehem | 81 395 | 7 | 11 628 |
| Bethulie | 9 220 | 3 | 3 073 |
| Bloemfontein | 309 768 | 21 | 14 751 |
| Boshof | 31 685 | 4 | 7 921 |
| Bothaville | 55 186 | 1 | 55 186 |
| Brandfort | 22 995 | 3 | 7 665 |
| Bultfontein | 28 589 | 2 | 14 295 |
| Clocolan | 18 342 | 1 | 18 342 |
| Dewetsdorp | 13 419 | 1 | 13 419 |
| Edenburg | 6 822 | 1 | 6 822 |
| Excelsior | 17 687 | 3 | 5 896 |
| Fauresmith | 8 859 | 2 | 4 430 |
| Ficksburg | 38 071 | 2 | 19 036 |
| Fouriesburg | 16 829 | 1 | 16 829 |
| Frankfort | 44 773 | 3 | 14 924 |
| Harrismith | 62 537 | 4 | 15 634 |
| Heilbron | 41 139 | 2 | 20 570 |
| Hennenman | 25 850 | 1 | 25 850 |
| Hoopstad | 27 905 | 1 | 27 905 |
| Jacobsdal | 11 327 | 1 | 11 327 |
| Jagersfontein | 6 354 | 1 | 6 354 |
| Koffiefontein | 10 302 | 2 | 5 151 |
| Koppies | 19 484 | 1 | 19 484 |
| Kroonstad | 111 880 | 5 | 22 376 |
| Ladybrand | 30 292 | 4 | 7 573 |
| Lindley | 37 673 | 4 | 9 418 |
| Marquard | 17 026 | 1 | 17 026 |
| Odendaalsrus | 106 266 | 4 | 26 567 |
| Parys | 51 396 | 1 | 51 396 |
| Petrusburg | 11 032 | 1 | 11 032 |
| Philippolis | 7 030 | 2 | 3 515 |
| Reddersburg | 6 000 | 1 | 6 000 |
| Reitz | 30 575 | 2 | 15 288 |
| Rouxville | 11 830 | 1 | 11 830 |
| Sasolburg | 91 079 | 5 | 18 216 |
| Senekal | 40 914 | 3 | 13 638 |
| Smithfield | 10 817 | 1 | 10 817 |
| Thaba 'Nchu | 66 213 | 2 | 33 107 |
| Theunissen | 39 932 | 2 | 19 966 |
| Trompsburg | 5 066 | 1 | 5 066 |
| Ventersburg | 14 505 | 1 | 14 505 |
| Viljoenskroon | 60 094 | 1 | 60 094 |
| Virginia | 82 684 | 5 | 16 537 |
| Vrede | 36 905 | 4 | 9 226 |
| Vredefort | 13 345 | 2 | 6 673 |
| Welkom | 261 473 | 15 | 17 432 |
| Wepener | 12 919 | 4 | 3 230 |
| Wesselsbron | 26 600 | 1 | 26 600 |
| Winburg | 17 556 | 1 | 17 556 |
| Witsieshoek | 391 994 | 8 | 48 999 |
| Zastron | 14 039 | 1 | 14 039 |

## 7.9 Police services

### SAPS mission and goals

### General overview

Policing in South Africa has traditionally not developed as a service aimed at meeting the needs and aspirations of our diverse communities. Policing was rather the appropriation and domination by particular governments to enforce specific political ideologies that were inconsistent with the democratic and popular aspirations and demands of the majority of people in South Africa.

The April 1994 elections ushered in a democracy that completely redefined the political and social context within which policing in South Africa is to function. "The advent of democracy demands a fundamental reassessment and transformation of the nature and style of policing. The Constitution prescribes the establishment of a national Police Service that is to be representative, legitimate, impartial, transparent and accountable – one which upholds and protects the fundamental rights of all people and carries out its mission in consultation and co-operation, and in accordance with the needs of the community" (SAPS: Website, 1996:1).

### Transformation of the South African Police Service

The transformation process of the South African Police Service is aimed at "meeting the requirements of the Constitution, the policies of the Government of National Unity and the very urgent need for the creation of a safe and secure environment for all citizens in our country that is conducive to development and quality of life. Indeed the prevailing climate of change in South Africa presents a golden opportunity to address a range of issues relevant to democratic policing" (SAPS: Website, 1996:1).

### The Reconstruction and Development Programme and the South African Police Service

There are five interlinking or interdependent programmes to support the transformation process. However, as the current budget does not allow for this change, assistance has been sought from the RDP fund and Official Donor Assistance to enable such change. This assistance will be required for the short term only (two to three years), until the South African Police Service budget is able to support RDP principles. The five programmes are the Community Policing Programme; the Information Management Programme; the Victim Support Programme; the Human Resource Development Programme and the Infrastructure Development Programme . These programmes will act as leverage, and will phase in the underlying objectives of the transformation process over the stated period (SAPS: Website, 1996:1).

To provide effective policing, SAPS and the RDP have established two policing plans: the "Shield and Sword Plan" and "Community Policing".

### Shield and Sword

The increasing stranglehold (both physical and psychological) of crime on South Africa must be broken immediately if the democracy and economy are to survive and

prosper. The firmest and most decisive action must be taken against crime immediately to prevent South Africa from plunging into the abyss of becoming yet another anarchic country. The eyes of South Africa and indeed the entire world are now on the SAPS to take the lead in the war against crime. The organisational framework within which crime will be fought and beaten is the annual police plan required by parliament. Each police plan is a campaign in the war against crime, to be fought and won within the context of the government's recently announced National Crime Prevention Strategy (NCPS) (*Servamus*, 1996:1).

### Police Plan 1996-1997

"The Police Plan for 1996/1997 is the first of its kind. It is a no-nonsense 'back-to-basics' policing plan aimed at crushing crime wherever it is encountered. It is also a radical reassessment and reorganisation of policing at grassroots level in South Africa. Operationally, the heart of the police plan is a 'Sword and Shield' approach where the SAPS takes the offensive by hunting down criminals everywhere while preventing crime by systematically reclaiming streets and rural areas from criminals. The SAPS will take the initiative from the criminals by turning them, and not law-abiding citizens, into the prey. The 'Sword and Shield' approach will simultaneously break the psychological and physical grip of crime and systematically reduce the operational capacity of criminals. Both serious and so-called 'petty crimes' will automatically fall within its ambit to turn the tide against criminals, thereby establishing a culture of respect for the law" (*Servamus*, 1996:1). The following will be implemented with the "Sword and Shield" approach:

### Sword

The "Sword" refers to the mobile striking force of the SAPS by which specialised SAPS units dealing mainly, but not exclusively, with crimes prioritised in the police plan, will relentlessly hunt identified criminals, day and night. These categories include hijacking and other vehicle-related crimes, gang-related crimes; taxi violence, possession of and trafficking in illegal weapons, narcotics-related offences, declared political massacres and robberies. "For this purpose 42 additional SAPS Task Forces have been set up to relentlessly hunt identified suspects, over and above other units whose normal function is tracking criminals. Although 'Sword' unit operations will not be confined to specific areas and will criss-cross South Africa, special attention will be paid to Gauteng, KwaZulu-Natal and the Western Cape. Their first aim is to track down and arrest South Africa's 10 000 most wanted suspects – already identified – within 30 days of the launch of the police plan. They will then systematically hunt down other target groups as they are identified" (*Servamus*, 1996:1).

### Shield

The "Shield" component of the plan will protect communities by reclaiming streets and rural areas and by deflecting cross-border and international crime. The SAPS will aggressively establish control and dominate specific geographical areas to create a policing shield for communities. A major aspect is that of partnership policing in which the police form specific alliances with certain sectors, for example the business and agricultural sector, shopkeepers, hawkers and the security industry. "Shield" will also feature hi-tech measures such as electronic and camera surveillance of certain CBD areas in South Africa (*Servamus*, 1996:1). Also, the idea of safety networks will be introduced, namely:

**International Safety Network** with Interpol to fight international crime such as fraud, counterfeit currency, gun smuggling, narcotics and money-laundering

**Regional Southern Africa Safety Network** with the police of Lesotho, Namibia, Angola, Zambia, Botswana, Malawi, Tanzania, Mozambique, Zimbabwe and Swaziland

**Border Safety Network** within South Africa itself, aimed at preventing cross-border criminal activity

**Urban Safety Network** to reclaim the streets from criminals

**Rural Safety Networks**, especially in KwaZulu-Natal, to combat political violence and rural crimes.

Parallel and ongoing measures to root out police corruption and improve discipline and service are also an integral part of the police plan. Naturally, the "Sword" and "Shield" components must be seen holistically as mutually supportive and co-ordinated. The 1996/97 Police Plan will make a decisive impact on South Africa's crime situation and so lay the foundation for eventually winning the war against crime. Ultimately, its success will depend on a supreme effort of will and commitment by all South Africans, but especially the SAPS and other organs of state in the justice system (*Servamus*, 1996:2).

## Community policing

Effective community policing embraces the active and willing contribution by the community to all aspects of police practices and procedures. "Such a co-operative endeavour, which stresses joint responsibility by citizens and police for community safety, requires a quantum leap in faith and trust between both parties" (Martin: SAPS Website, 1995:12).

Community policing has three basic premises:

- To work in mutual partnership with the community to protect life and property
- To solve neighbourhood problems
- To enhance the quality of life in our cities/country

The police, being the first line of defence in law enforcement, crime prevention, and public safety should be given permission to carry out these functions as they deem necessary. They cannot do this alone however, and in spite of community policing, the public must become involved as the eyes and ears on the home front.

## Methods of community policing

- Increasing foot and bicycle patrols
- Designating certain officers to specific areas of the city to increase familiarity between police and public
- Decentralising by placement of storefronts and neighbourhood offices in crisis areas of the city

- Developing sub-stations
- Forming alternative response teams composed of trained personnel such as nurses or social workers to work out of the storefronts
- Holding town hall meetings to gain community co-operation and to increase officers' involvement in extracurricular community activities such as teaching crime prevention and safety programmes.

If the public continues its active involvement in law enforcement, crime prevention and public safety efforts, community policing will be a success (Martin: Website, 1995:15).

### 7.9.1 Access to police services

Police services in the Free State are readily accessible to all inhabitants of the province. For every police station in the traditional white residential areas, a contact point or satellite police station was established in traditional black townships. However, certain areas such as Thaba 'Nchu do not have any telephones. A project is currently being launched in co-operation with Telkom to address this shortcoming. In the interim these areas are patrolled by the police as mobile service centres.

Work study investigations are undertaken periodically regarding requests for new police stations and contact points. The establishment of the following new police stations have been approved at national level as RDP projects: Namahadi (Frankfort), Thumahole (Parys), Batho (Bloemfontein) and Thaba 'Nchu.

#### Policy guidelines

Currently the following policy guidelines for the provision of police facilities are used to meet requirements in rural and urban areas: population of the area, surface of the area, crime rate in the area and available human resources of the SAPS.

These criteria will also be used to meet future service needs.

#### Best or worst-off districts

To counteract any imbalances in facilities and services suggested by the map, the Free State Police Service was divided into three areas: northern Free State – Welkom; eastern Free State – Bethlehem; and southern Free State – Bloemfontein. These areas were carefully planned to balance all police resources and facilities so that these are equally distributed and therefore no areas are better or worse off than others.

#### Issues relevant to meeting future needs

The police in the Free State were involved in an interdepartmental workshop regarding a growth and development strategy for the Free State province. This led to the development of a "Special Growth and Development Framework for the Free State", as formulated by a provincial "Think Tools" team during their provincial strategic planning workshop. The SAPS centres (police stations) and hospitals will also be included in the spatial framework. The RDP office of the Free State provincial administration is also establishing a database for the Free State, which contains much information to facilitate effective police services.

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South African Police Service

# MAP 23 : POPULATION PER POLICE STATION

Source : S A Police Services

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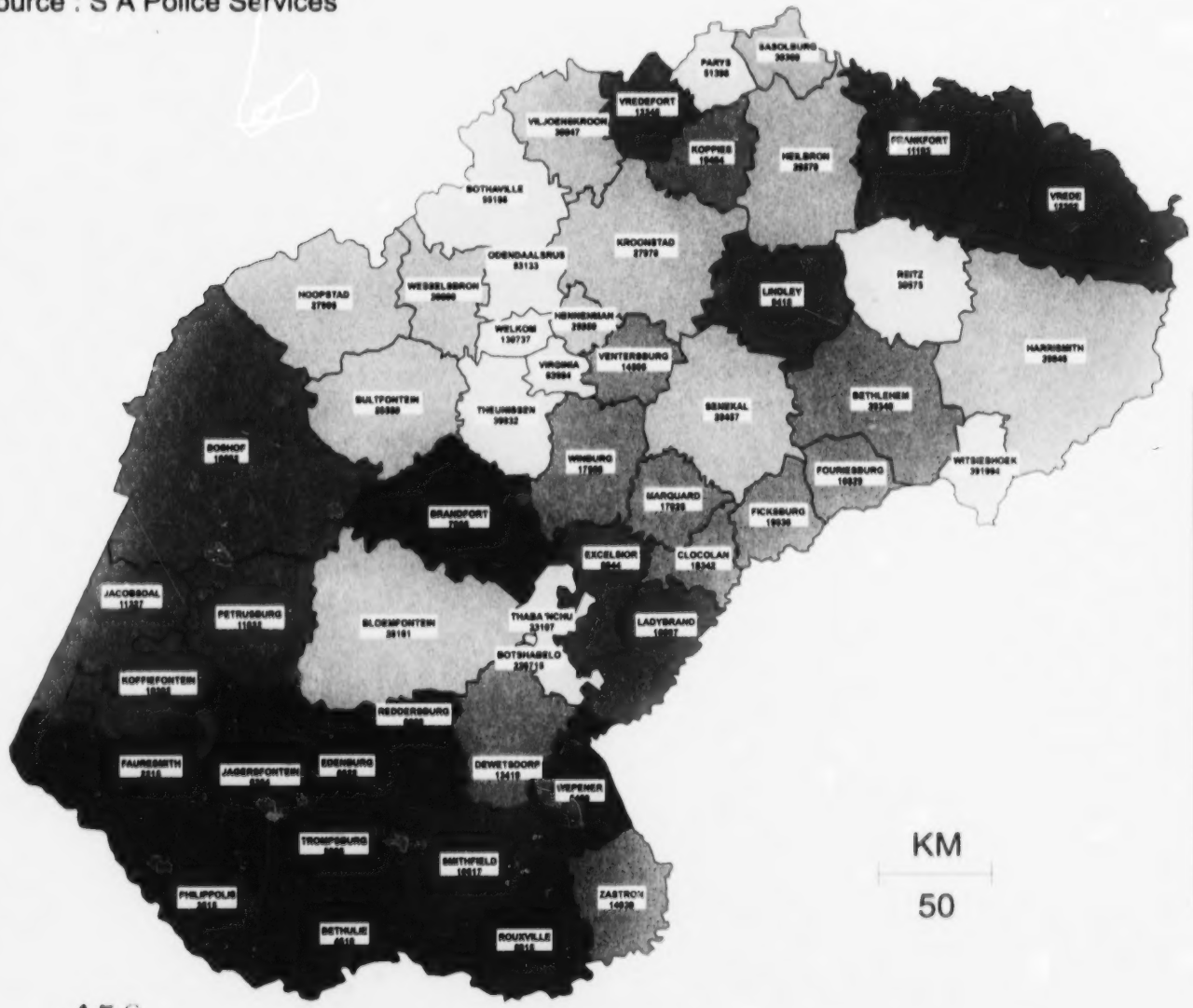


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KM

50

## Population per police station

- 2 215 to 7 665
- 7 665 to 13 345
- 13 345 to 20 349
- 20 349 to 30 360
- 30 360 to 391 994

## Table 23 Population per police station

| DISTRICT | TOTAL POPULATION | POLICE FACILITY | TOTAL POP. PER POLICE FACILITY |
|---|---|---|---|
| Bethlehem | 81 395 | 4 | 20 349 |
| Bethulie | 9 220 | 2 | 4 610 |
| Bloemfontein | 309 768 | 11 | 28 161 |
| Boshof | 31 685 | 3 | 10 562 |
| Bothaville | 55 186 | 1 | 55 186 |
| Botshabelo | 226 715 | 1 | 226 715 |
| Brandfort | 22 995 | 3 | 7 665 |
| Bultfontein | 28 589 | 1 | 28 589 |
| Clocolan | 18 342 | 1 | 18 342 |
| Dewetsdorp | 13 419 | 1 | 13 419 |
| Edenburg | 6 822 | 1 | 6 822 |
| Excelsior | 17 687 | 2 | 8 844 |
| Fauresmith | 8 859 | 4 | 2 215 |
| Ficksburg | 38 071 | 2 | 19 036 |
| Fouriesburg | 16 829 | 1 | 16 829 |
| Frankfort | 44 773 | 4 | 11 193 |
| Harrismith | 62 537 | 3 | 20 846 |
| Heilbron | 41 139 | 2 | 20 570 |
| Hennenman | 25 850 | 1 | 25 850 |
| Hoopstad | 27 905 | 1 | 27 905 |
| Jacobsdal | 11 327 | 1 | 11 327 |
| Jagersfontein | 6 354 | 1 | 6 354 |
| Koffiefontein | 10 302 | 1 | 10 302 |
| Koppies | 19 484 | 1 | 19 484 |
| Kroonstad | 111 880 | 4 | 27 970 |
| Ladybrand | 30 292 | 3 | 10 097 |
| Lindley | 37 673 | 4 | 9 418 |
| Marquard | 17 026 | 1 | 17 026 |
| Odendaalsrus | 106 266 | 2 | 53 133 |
| Parys | 51 396 | 1 | 51 396 |
| Petrusburg | 11 032 | 1 | 11 032 |
| Philippolis | 7 030 | 2 | 3 515 |
| Reddersburg | 6 000 | 1 | 6 000 |
| Reitz | 30 575 | 1 | 30 575 |
| Rouxville | 11 830 | 2 | 5 915 |
| Sasolburg | 91 079 | 3 | 30 360 |
| Senekal | 40 914 | 2 | 20 457 |
| Smithfield | 10 817 | 1 | 10 817 |
| Thaba 'Nchu | 66 213 | 2 | 33 107 |
| Theunissen | 39 932 | 1 | 39 932 |
| Trompsburg | 5 066 | 1 | 5 066 |
| Ventersburg | 14 505 | 1 | 14 505 |
| Viljoenskroon | 60 094 | 2 | 30 047 |
| Virginia | 82 684 | 1 | 82 684 |
| Vrede | 36 905 | 3 | 12 302 |
| Vredefort | 13 345 | 1 | 13 345 |
| Welkom | 261 473 | 2 | 130 737 |
| Wepener | 12 919 | 2 | 6 460 |
| Wesselsbron | 26 600 | 1 | 26 600 |
| Winburg | 17 556 | 1 | 17 556 |
| Witsieshoek | 391 994 | 1 | 391 994 |
| Zastron | 14 039 | 1 | 14 039 |

# 8

# DISCUSSION: The overall picture

## Service Needs Index

As discussed in Section 4.2 the service variables selected for the Service Needs Index were ratios of population to police stations, post offices and hospital beds; the ratio of road length to district area; the ratio of 6 to 17 year olds to schools; percentages of fully serviced houses, informal houses, formal houses electrified and informal houses electrified and telephone shares.

A district with a low service index score and not requiring development intervention would have the following service profile: low ratios of population to police stations, post offices and hospital beds; a high ratio of road length to district area; a low ratio of 6 to 17 year olds to schools; high percentages of fully serviced houses, formal houses electrified and informal houses electrified; high telephone shares, and a low percentage of informal houses. A district with a high index score requires development intervention and would have the following service profile: high ratios of population to police stations, post offices and hospital beds; a low ratio of road length to district area; a high ratio of 6 to 17 year olds to schools; low percentages of fully serviced houses, formal houses electrified and informal houses electrified; low telephone shares, and a high percentage of informal houses.

Along the western border and extending into the central areas of the Free State there is a cluster of districts that are underdeveloped in terms of service provision. This cluster extends from Jacobsdal in the south-west to Viljoenskroon in the north-west and to Marquard in the mid-east.

Witsieshoek in the east is the most underdeveloped district in the Free State, having a Service Needs Index of 90. It scores a disturbing 56 and 47 index points higher than its neighbours, Bethlehem and Harrismith, respectively. Thaba 'Nchu and Botshabelo have the next highest scores of 77 and 75, respectively. Thus the former black areas are the most underdeveloped in terms of service provision.

The next three districts scoring between 69 and 67 on the Service Needs Index are Ventersburg, Bothaville and Koppies. These three districts border on the well-developed Kroonstad district which has a Service Needs Index score of 40. Virginia, like Kroonstad, has a score of 40 and also has Ventersburg as a neighbour. South of Virginia is the far less developed Theunissen, which has a score of 65. Zastron and Rouxville in the south-east are also less developed than their neighbours.

There is a positive correlation (Pearsons=0,54) between the Service Needs and the Social Needs Indices. This indicates a moderate association between high levels of service provision and high socio-economic status in a district, and vice versa. As correlations do not neccessarily indicate causality, it therefore cannot be assumed that the provision of services alone will bring about high socio-economic status. Economic upliftment programmes will have to be implemented in conjunction with the removal of services backlogs.

## Combined Social and Service Index

There are two major clusters of districts that are underdeveloped in terms of both the Social and Service Needs Indices. These are in the north and north-west of the province. The two clusters are separated by a group of more developed districts that extend from Viljoenskroon in the north-west to Ficksburg in the mid-east.

The north-west cluster is a region of low socio-economic and service status. This region is bordered by the commercial and industrial centres of Bloemfontein to the south and the Goldfields to the north. The northern underdeveloped region includes Parys, Koppies, Lindley, Heilbron and Frankfort.

The largest cluster of relatively well-developed districts extends from Brandfort and Bloemfontein to the south and west. Within this relatively well-developed cluster is Jagersfontein which is much less developed than its neighbours. To the south-east of this cluster are Rouxville and Zastron, both of which are less developed than their neighbours.

Witsieshoek is by far the most underdeveloped district, followed by Botshabelo. Some districts from the former white Orange Free State have scores close to that of the former black administered Thaba 'Nchu. The discussion on the Gini coefficient in Chapter 3 indicates that the burden of poverty has fallen on black shoulders. It is important to remember that while many former white districts are very underdeveloped, it is the black communities within these districts that need upliftment.

## Summary of commentators' views

**Population density:** The highest densities in the Free State are found in the former homeland areas (Witsieshoek, Botshabelo, and Thaba 'Nchu). The densities in Witsieshoek and Botshabelo of 327 and 994 persons per square kilometre respectively in 1991 exceeded the provincial average of nearly 20 persons per square kilometre for the same year. The apartheid strategy which kept black people out of so-called white areas is the main reason for this phenomena and resulted in large numbers of people being located on relatively small pieces of land. The mining and industrial districts of Welkom, Virginia, Odendaalsrus and Sasolburg also had high densities, while Bloemfontein (mainly as an administrative centre) was also relatively densely populated. The relatively high density in Ficksburg is the result of its proximity to the Lesotho border, and its serving as a trade centre for Maputsoe in Lesotho.

**Labour force participation rate:** According to the map the majority of the labour force in the Free State can be found in the Goldfields region, with the highest concentration in Welkom (164 469). Large sections of the labour force are also found in Bloemfontein (141 031), Witsieshoek (82 969) and Botshabelo (67 934). It seems that the overall participation rate in the Free State (65%) exceeds that of the country (58%). This can be accounted for by the high participation rates in the mining areas such as Welkom (83%), Odendaalsrus (74%) and Virginia (85%). These districts have most likely absorbed a large number of migrant workers, thus the high rates of participation. Other areas with high participation rates are Sasolburg (69%), Viljoenskroon (77%), Hennenman (73%) and Theunissen (80%). Relatively low participation rates were recorded in Witsieshoek and Thaba 'Nchu, 45% and 39% respectively. This can mainly be ascribed to the presence of migrant worker families

resident in these areas, while the breadwinners are employed elsewhere – a legacy of apartheid politics.

**Dependency ratio:** During 1991 each economically active person in the Free State had to support 1,4 other people on average, while the average for South Africa was approximately 2,0. However, one has to take into account the effect of migrant workers on the ratio, since this could understate the average dependency ratio of the Free State. The dependency ratios for Witsieshoek and Thaba 'Nchu are very high – the highest recorded ratios for the Free State. The main reason for this is the absence of income-earning individuals from the region, that is low labour force participation. In the Welkom area the dependency ratios are quite low – 0,4, 0,5 and 0,9 in Virginia, Welkom and Odendaalsrus respectively. This reflects the high proportion of economically active people in the area.

**Poverty:** Poverty is widespread in the Free State. High poverty regions surround a few major growth points such as Bloemfontein, Welkom and Sasolburg. The highest levels are in the southern regions around Bloemfontein. There is a sudden increase in the level of poverty as one moves from the urban to the rural areas. This may well be an indicator of differences in wages between the secondary, tertiary and agricultural sectors.

**Functional literacy:** Bloemfontein, Welkom and Sasolburg are the more industrialised areas of the Free State where secondary and tertiary economic activities require a higher level of literacy to gain employment. This may be the reason for the higher concentration of functionally literate people in this area. The low literacy in the western Free State farming districts of Vrede, Reitz, Rouxville, Dewetsdorp, Marquard and Fouriesburg is very disturbing. However, literacy in the majority of the mainly farming districts is low because literacy is not required to be employed as a farm labourer.

**Education:** In general the pupil:teacher ratio in the Free State is not far from the 1991 national average of 41:1. A few districts, mainly the western parts, will have to take dramatic steps to adapt to new proposed ratios of 40:1. In addition to this the fact that many teachers in African education are relatively underqualified may mean disaster in the future. The same applies to the industrialised area of Sasolburg. Compared with other parts of the country, the Free State seems reasonably well off as far as the number of teachers is concerned.

**Health care:** The previous administrations were centred in Bloemfontein, Mmabatho and Phutaditjhaba. Now there is as one provincial administration and six regional administrations: Region A: Bloemfontein; Region B: Koffiefontein; Region C: Welkom; Region D: Kroonstad; Region E: Phuthaditjhaba/Harrismith and Region F: Bethlehem.

There is a maldistribution of every category of specialised personnel predominantly in favour of Region A and to a much lesser extent of Regions C, D and F and a total absence of certain key personnel for Regions B and E. It will therefore be necessary for the academic health centre in Bloemfontein to reorganise its service to build capacity in the peripheral areas. Student or registrar allocation as well as consultation services can be extended to include the distant regions. Effective referral services as well as referral protocols need to be established after capacity has been strengthened in the other regions.

**Housing:** The housing backlog corresponds in some regions to the percentage of informal housing. The housing backlog is lowest in the southern regions where the percentage of informal housing is also low. The backlog is greatest in the districts surrounding Welkom and includes Bultfontein, Theunissen, Virginia, Odendaalsrus and Bothaville. Other districts where the backlog is high are Bloemfontein, Senekal, Bethlehem, Ficksburg and Sasolburg.

**Water and sanitation:** Besides Witsieshoek and some of the farming communities, the people of the province are generally well served with water. Sanitation however remains a problem in the peri-urban informal settlements and the former homeland areas. Amid high expectation the Department of Water Affairs and Forestry's Community Water Supply and Sanitation programmes are providing basic RDP services to the rural areas (mostly Witsieshoek and Thaba 'Nchu). A policy to address the problems of the farming communities is required, as is a change of attitude to payment and care of services since this will increase the probability of sustaining higher levels of water provision and sanitation services.

**Electricity:** Regarding electricity supply, Eskom is trying to enhance accessibility to this service with the basic requirement of connecting 80% of customers in a township to a supply point. This programme is divided into two main regions, the Goldfields and the Free State. In the Goldfields nine black townships with a total of 26 179 proclaimed stands are scheduled to be 89,9% electrified by the end of 1998. In 1992 Eskom had no customers in these townships, but by 1993 and 1994 4 902 and 8 849 new connections respectively had been made. In 1995 new connections dropped to 2 976, but rose to 4 850 in 1996.

**Roads:** Much of the southern Free State has a low ratio of road length per square kilometre. Other areas with low road length per square kilometre ratios are Witsieshoek in the east and Hoopstad and Boshof in the west. Districts with greater ratios of road length per square kilometre correspond to the more industrialised centres around Bloemfontein, Welkom, Sasolburg, and a cluster of districts on the border with Lesotho.

**Telecommunications:** The highest priority district is Witsieshoek. The other district that was not part of the former Orange Free State is Thaba 'Nchu, formerly part of Bophuthatswana. Thaba 'Nchu also falls into the high priority category. Adjacent to Thaba 'Nchu is Botshabelo, a predominantly black area that was part of the former Orange Free State. Botshabelo also has a high score and is second only to Witsieshoek in priority ranking. While the legacy of apartheid leads one to expect these predominately black areas to be underserviced, it should be noted that many districts from the former Orange Free State are also very high priority districts. Vredefort and Koppies are two adjacent high priority areas bordering on low to medium priority districts, such as Sasolburg to the north and Kroonstad in the south.

**Postal services:** The existing network of post offices and postal agencies does not reflect the population distribution in the Free State province. In general, there is an overservicing in developed communities and the services in underdeveloped and disadvantaged communities are totally inadequate. A major effort is therefore required to render services in disadvantaged communities. This will be done in co-operation with private enterprises and host businesses to establish conventional post offices, retail post offices or retail postal agencies in their buildings.

**Police services:** Police services in the Free State are readily accessible to all inhabitants of the province. For every police station in the traditional white residential areas, a contact point or satellite police station was established in traditional black townships. Certain areas such as Thaba 'Nchu do not have any telephones, so in the interim these areas are patrolled by the police as mobile service centres. Work study investigations are undertaken periodically regarding requests for new police stations and contact points. The establishment of the following new police stations have been approved at national level as RDP projects: Namahadi (Frankfort), Thumahole (Parys), Batho (Bloemfontein) and Thaba 'Nchu.

## Conclusion

The industrialised urban areas have relatively high labour participation rates and functional literacy levels. As labour migrates to the urban areas housing backlogs in these areas rise relative to the rest of the province. The more developed urban areas tend to be overserviced, while the less developed areas are underserviced. The apartheid policies of racial segregation and job reservation have resulted in the less developed areas being almost exclusively black.

In the rural areas poverty, dependency ratios and illteracy are higher than in the urban areas. This is partly due to the primary sector in the rural areas utilising labour with lower levels of education. Better qualified labour tends to migrate to urban areas where these people seek employment in the secondary and tertiary economic sectors.

Future research could monitor changes in service provision and socio-economic status. The main sources of data would be the 1996 Census, service providers and the RDP programmes. The 1996 Census would enable the Social Needs Index to be updated, but would provide information on services to households only. Service providers and government departments could be the sources of information regarding the provision of public services. The most important facet of the 1996 Census is that information on household services will be available at enumerator area (EA) level. As EAs usually are socio-economically homogenous, this will allow rigorous analysis of the relationship between socio-economic status and service provision.

It is highly probable that as there is now a political will to provide services and economically uplift previously disadvantaged communities, these communities should simultaneously experience improved socio-economic status and service provision. The process of creating an equitable society should be monitored by the above research to provide insight into the rate of change in the spatial distribution of services as well as socio-economic status. It is hoped that this document and future research will contribute to the process of uplifting the disadvantaged and thereby contribute to the creation of an equitable South African society.

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GIS Unit
Human Sciences Research Council

# MAP 24 : SERVICE PROVISION INDEX

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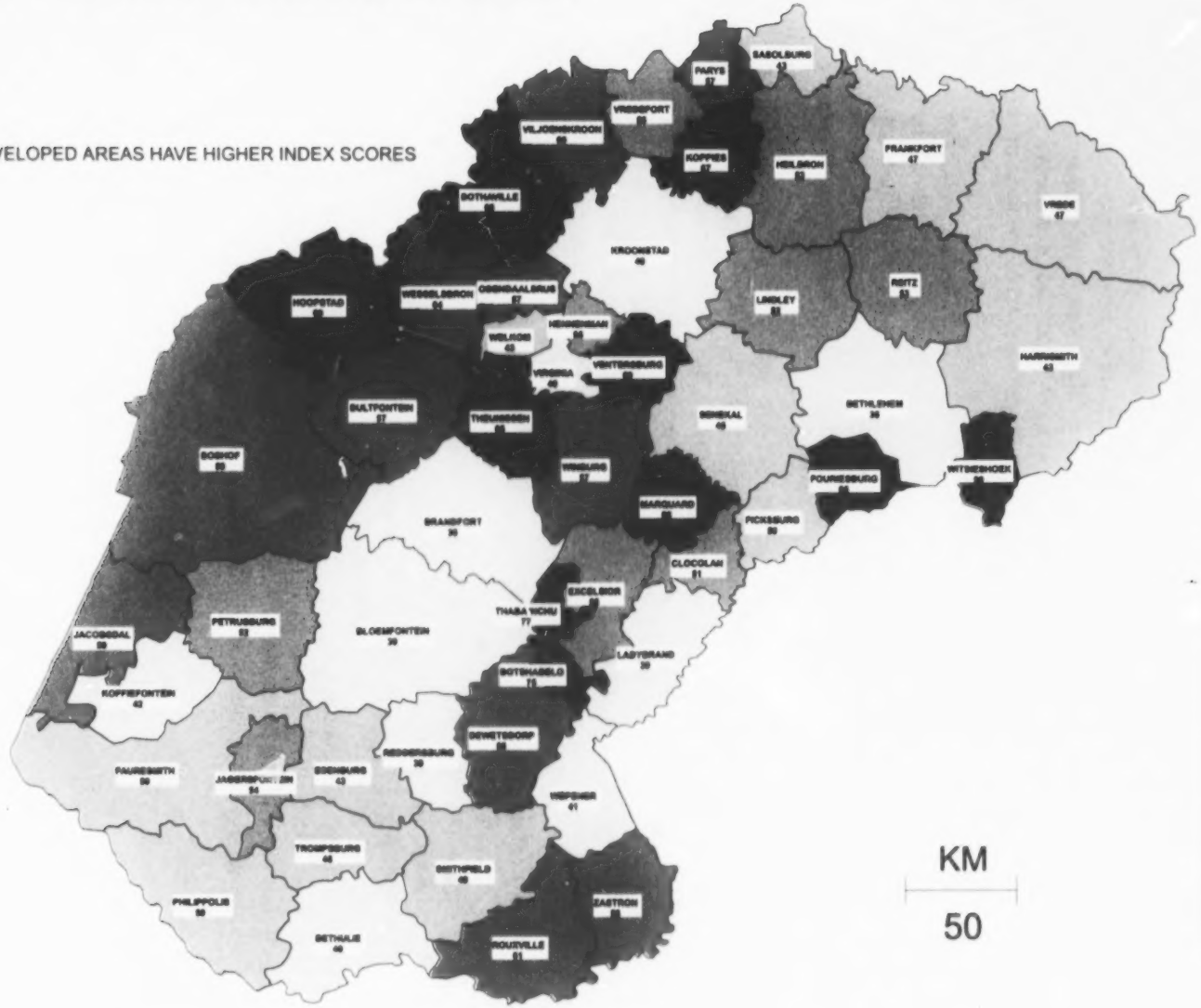
UNDERDEVELOPED AREAS HAVE HIGHER INDEX SCORES



## Table 24 Combined Social Needs and Service Provision Index

| DISTRICT | SERVICE INDEX | SOCIAL INDEX | COMPOSITE INDEX |
|---|---|---|---|
| Witsieshoek | 90 | 68 | 79 |
| Botshabelo | 75 | 66 | 71 |
| Fouriesburg | 66 | 70 | 68 |
| Thaba 'Nchu | 77 | 59 | 68 |
| Wesselsbron | 64 | 65 | 65 |
| Bothaville | 68 | 60 | 64 |
| Marquard | 66 | 61 | 64 |
| Hoopstad | 69 | 56 | 63 |
| Koppies | 67 | 57 | 62 |
| Ventersburg | 69 | 53 | 61 |
| Lindley | 52 | 68 | 60 |
| Parys | 57 | 63 | 60 |
| Odendaalsrus | 57 | 61 | 59 |
| Heilbron | 53 | 63 | 58 |
| Zastron | 58 | 58 | 58 |
| Bultfontein | 57 | 57 | 57 |
| Theunissen | 65 | 49 | 57 |
| Frankfort | 47 | 64 | 56 |
| Rouxville | 61 | 51 | 56 |
| Jagersfontein | 54 | 55 | 55 |
| Winburg | 57 | 53 | 55 |
| Boshof | 59 | 48 | 54 |
| Excelsior | 56 | 52 | 54 |
| Reitz | 53 | 55 | 54 |
| Senekal | 45 | 63 | 54 |
| Vrede | 47 | 60 | 54 |
| Vredefort | 56 | 52 | 54 |
| Hennenman | 55 | 50 | 53 |
| Viljoenskroon | 60 | 46 | 53 |
| Clocolan | 51 | 53 | 52 |
| Dewetsdorp | 58 | 44 | 51 |
| Ficksburg | 50 | 50 | 50 |
| Jacobsdal | 59 | 31 | 45 |
| Smithfield | 49 | 40 | 45 |
| Wepener | 41 | 48 | 45 |
| Harrismith | 43 | 45 | 44 |
| Ladybrand | 39 | 48 | 44 |
| Welkom | 43 | 44 | 44 |
| Reddersburg | 39 | 46 | 43 |
| Kroonstad | 40 | 44 | 42 |
| Petrusburg | 52 | 32 | 42 |
| Sasolburg | 43 | 40 | 42 |
| Trompsburg | 46 | 37 | 42 |
| Bethlehem | 36 | 46 | 41 |
| Bloemfontein | 39 | 43 | 41 |
| Bethulie | 40 | 40 | 40 |
| Koffiefontein | 42 | 35 | 39 |
| Philippolis | 50 | 28 | 39 |
| Virginia | 40 | 37 | 39 |
| Brandfort | 36 | 40 | 38 |
| Edenburg | 43 | 33 | 38 |
| Fauresmith | 50 | 26 | 38 |

# MAP 25 : COMBINED SOCIAL NEEDS AND SERVICE PROVISION INDEX

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# 9

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This book is one of a series that uses Geographic Information Systems (GIS) to outline the need for and provision of services in each of the nine South African provinces. A global view or indicator of the simultaneous influence of the socio-economic status of people and the level of provision of domestic services and public facilities in all districts is needed. Such a view encapsulates the social and service profile of each district, and can be obtained, firstly, by developing indices for the social and service variables for each district. A single index, or benchmark, of levels of socio-economic status, household services and public facilities in each magisterial district is created by combining these indices.

Graphic and tabular representations of levels of development can highlight spatial inequalities and thereby raise questions of causality. To provide information about local levels of development, knowledgeable persons involved in service delivery in each province were contacted for their comments. The books in this series contain maps, tables and contributions from spokespersons in NGOs, universities, government departments, service providers, parastatals and research organisations.

It is hoped that these books and future research on the rate of change in socio-economic status and service provision will contribute to the creation of an equitable South African society.

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